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CLINICAL LECTURE.[1]

APPENDICITIS—OPERATION.

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Gentlemen:—The first patient that I show you to-day is a young man, twenty-four years of age, who presents an interesting condition, the treatment of which may be said to be one of the burning questions of surgery at the present time. The patient was admitted to this Hospital last July, suffering with typhoid fever. He recovered and left the house August 15, but was again admitted in September with perityphlitis, which is an inflammation around the cæcum. He remained in the Hospital nine days, got better and went out. He again returned on December 9, after an interval of three months. On this occasion he said that five days before admission he had been taken with pain in the right iliac fossa, and with symptoms in every respect similar to those of the former attack. In the abdomen, in the right iliac region, there was a distinct mass four or five inches by two inches, painful on pressure. The temperature was 101.4° F. The urine was of a dark color, but contained no albumen or sugar. The amount passed in 24 hours was thirty-four ounces. The treatment consisted in the administration of calomel and soda until the bowels were moved. Blisters were applied over the painful region. The day following admission the pain was much relieved, and the temperature had fallen to 99° F. The bowels moved easily. December 12, there was still improvement; the mass was not so tender, and was smaller. On the 15th, there was no pain and the mass was still smaller. On the 19th, he was discharged with some slight resistance in the right iliac fossa, but no pain.

Such was the history until he presented himself the day before yesterday with the statement that three days before he had had a return of pain in the right iliac region. There is now a mass in this region which is not as diffuse as in the last attack. While there is some hardness and resistance in the line of the groin, yet the principal tumor appears to be circumscribed, two inches inside of the anterior superior iliac spine, in other words, in the position of the vermiform appendix. The patient has great pain and has lost much sleep, and there is great tenderness not only on firm pressure but on the slightest touch, with a faint suspicion of doughiness, suggestive of deep-seated pus. There is also high temperature and marked constitutional disturbance.

The first question in this case is in regard to the diagnosis, and the second in regard to the treatment. There can be no doubt, I think, that it is a variety of what is called perityphlitis. It seems to me that the inflammation must be more localized to the appendix than it was in the former attack, and that it is proper, therefore, to designate the present condition by the somewhat clumsy term of appendicitis.

With regard to the treatment: The prevailing tendency is toward exploratory operations in all cases in which inflammation occurs in this situation. I am sufficiently conservative to believe that indiscriminate operation in these cases is injudicious, and that a very large number of cases of perityphlitis and typhlitis will end in recovery under simple treatment and not recur, or that if they do, the patients may still get well without any particular danger, and have no special trouble as the result of the disease. In other cases, the disease will run on to the production of peritonitis, sometimes general peritonitis, but even under these circumstances it does not seem to me that the line of safety is, as a rule, in operation. I be-

[1] Delivered at the Pennsylvania Hospital.

lieve, however, that there are some instances, and I think that this is one, in which we can fairly well localize the inflammation to the appendix. There is no general peritonitis. There does not appear to be any great extent of local peritonitis. There is reason to believe that the appendix is inflamed, possibly surrounded by a collection of pus, and probably containing some concrete mucus, possibly a foreign body. We have to consider what will be the condition if the patient is let alone. He may convalesce as on previous occasions, and may go a long while without recurrence. On the other hand there is a certain amount of risk that the collection of pus, which I suspect is present, may burst, and that the pus will be poured out into the peritoneal cavity leading to general suppurative peritonitis. In this particular case, it seems to me that it is justifiable to make an exploration, and, if we find that the appendix is diseased, to remove it, provided that it is not so firmly bound down as to render removal impossible.

I do not recommend an operation in these cases when there is simply perityphlitis without the inflammation being localized. Nor on the other hand do I recommend an operation where the case has run on to the production of general peritonitis, unless it is suppurative peritonitis. Then, although the patient will probably die, the only hope lies in the evacuation of the pus and the washing out of the abdominal cavity. Ordinary cases of peritonitis following typhilitis admit of safer treatment than by opening the abdomen. The ordinary treatment of peritonitis will in these cases give a better hope of recovery. When there is a localized inflammation which can almost be traced to the appendix itself, and when pus is probably present, I think an operation is justifiable. It is therefore only in exceptional cases that I recommend an operation.

The question has been agitated as to the time when the operation should be performed; whether it should be done when the part is inflamed, or whether in the interval between the attacks, when the patient is well. Here again I am conservative enough to say that if the patient is well, he should be let alone. The time to operate is when he is suffering. Those surgeons who hold that opening the abdomen is attended with little or no risk believe that it is right to operate when the patient is well. In my judgment, the time to operate is when there is danger to life, and yet not such imminent danger as in general peritonitis.

My colleagues, Drs. Hunt and Morton, have examined this case, and agree that it is a proper one for exploration. On the former occasion the patient was so much improved twenty-four hours after admission, that he was practically convalescent. If I had found the same improvement follow in the present attack, I should have been disposed to recommend that operation be not resorted to. There has, however, not been such improvement as to make it probable that spontaneous recovery will occur.

I shall now proceed to the operation. The parts have been rendered aseptic, and I shall make an incision in the direction of the linea semilunaris, making a part of the incision over the point which we know to be the usual position of the appendix, that is two inches inside of the anterior superior spine of the ilium. The incision is four inches long, and the bleeding is controlled with hæmostatic forceps. Cautiously cutting down to the peritoneum, I tie the vessels with catgut ligatures before opening it. Incising the peritoneum there is at once a discharge of pus. This cavity, which is walled off by adhesions from the general peritoneal space, is irrigated with hot water, and with some difficulty I am now able to bring the appendix into the wound. This I cut off after tying it with a strong silk ligature. After the cavity is thoroughly irrigated, I insert a glass drainage tube, and suture the peritoneum with catgut, then uniting the skin and muscles with silver wire. The usual antiseptic dressings are applied and the patient is returned to his ward.

[Convalescence was uninterrupted, the drainage tube was removed in a few days, and the patient left the Hospital after some weeks, entirely recovered].

COMMUNICATIONS.

RELIEF OF PARTIAL INTESTINAL OBSTRUCTION FOLLOWING THE REMOVAL OF THE UTERINE APPENDAGES.

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Questions concerning the limitations of abdominal surgery for good and ill, are still pressing for solution. Conditions which demand immediate operation (which positively contra-indicate abdominal section) or which render delay advisable, are constantly con-

fronting the surgeon. Because of the multitude of diseased conditions found within the abdomen, the complexity of the problems involved, and the well recognized impossibility of making absolute diagnosis in all cases. Greater responsibility is thrown upon the surgeon than is the case in the surgery of other regions of the body. This aspect of the subject, while it should stimulate the surgeon to make use of all known means in reaching conclusions, should also prevent him from forming absolutely fixed opinions except upon very positive evidence. The grounds upon which to advise abdominal section and upon which to refuse it, are not yet fixed.

More especially is this true when the symptoms complained of, cannot be explained on physical grounds. Some have gone so far as to decry operation in all cases in which a bi-manual examination will not reveal some gross physical lesion. And yet such a rule will leave many women chronic invalids who can be cured or improved by operation. The effect of cystic and of atrophic ovaries, and of chronic ovaritis upon the health of women, is well recognized, and yet, these conditions are by no means always susceptible of diagnosis by bi-manual examination. The relation of adhesions to pelvic pain is always obscure. Even more gross pathological lesions may not be appreciated during the bi-manual examination. In some cases a consistent history of suffering referred to the pelvis must be sufficient to justify operation. This indication, of course, opens the door to indiscriminate and unnecessary operating in the hands of those so inclined, but this constitutes simply an abuse of the indication. Exploratory abdominal section has so little danger that it is justifiable and urgent after simple means fail in all cases in which life is endangered or health is destroyed by pelvic (abdominal) disease, not plainly inoperable.

As illustrating this principle, the case of Mrs. R. is reported. A surgeon who is a staunch opponent of operation except for gross diseases, refused to operate upon her, alleging that her sufferings were hysterical, because he had removed her uterine appendages, and because he could find nothing further to remove.

The woman's history has been prepared for me by Dr. Deekens, and is as follows:

Mrs. R., aged 29 years, German, of good family history, came to America seven years ago. She had always been strong and healthy up to that time. She worked in the country, and while over-exerting herself, lifting heavy weights, suddenly felt a sharp cutting pain in both groins, followed by great faintness, necessitating rest in bed for a day or two. Her subsequent period was intensely painful, and was followed by profuse metrorrhagia, which remained almost constant, producing a high degree of anæmia. She remained in this condition a year, still doing her work when able. At the end of that time she was married. Pregnancy followed shortly afterwards, and three months later while working hard, was seized with sharp groin pains as before, accompanied by abdominal cramps, succeeded by a free hæmorrhage containing masses of clotted blood. A physician was called in who pronounced it a miscarriage. In about six months she had a recurrence of her former pains, followed by symptoms of pelvic peritonitis with constipation, dischezia, dyspareunia, dysecoia, etc. Under the rest cure for several months, coupled with antiphlogistic treatment, she improved, and shortly after became pregnant. She was delivered instrumentally of a very large child.

The subsequent history is merely a repetition of the past, with intermitting attacks of pelvic inflammation, of greater or lesser severity, partially relieved temporarily by rest, poultices, glycerine tampons, etc. She was then advised to enter a hospital, and within the next few years was an inmate of four of the general hospitals of the city. She was by this time a broken down hysterical hypochondriac, not being free from pain for an hour. In April 1889, a double ovariotomy was performed, both ovaries being found enlarged and cystic. Partial relief followed the operation temporarily, but later she suffered extremely from abdominal pain.

A year later we again find her a hospital inmate. At this time she could not walk owing to the excruciating pains caused by locomotion. The surgeon-in-chief decided that a secondary operation was not indicated, presuming that the symptoms were mainly of a hysterical order. The patient's sufferings were real, however, and she sought admission to the Kensington Hospital for Women. Her condition was one of profound anæmenia, malnutrition and neurasthenia, and the chief complaints were, pain on locomotion, defecation and coition. Special stress was laid on the agony accompanying defecation. On examination a hard, sensitive mass was found to the left and behind the uterus, evidently connected with the stump from the left ovary and tube. Simple intestinal adhesions or septic inflammation

about the ligature was suspected. The uterus was also found bound firmly in retroflection. These conditions were considered sufficient to account for the pelvic pain, and an exploratory incision was advised and gladly accepted.

On opening the abdomen, the uterus, small intestines, rectum, and stump of the left ovary and tube, were found firmly matted together. A beginning was made by freeing the uterus, when the intestines were, with long-continued effort, separated.

One knuckle of ileum was adherent deep in the pelvis, and the peritoneal and muscular coats were torn off in detaching it, necessitating sutures. The mass now consisted of thickened, broad ligament, and adherent rectum. As this is a fairly stationary organ, its separation was not attempted. No evidence of pus was found about the old pedicle. Irrigation and drainage completed the operation. The convalescence was interrupted by the appearance of symptoms of obstruction of the bowels on the second day, the most prominent symptoms being abdominal pain and increasing tympany and vomiting.

In anticipation of this possibility, powders of calomel (gr. $\frac{1}{12}$) had been given hourly, commencing on the first day. Enemas of turpentine and glycerin, and of soap suds given through the rectal tube, for a long time proved ineffectual. Concentrated solution of citrate of magnesia was given and rejected. The bowels were finally moved on the fourth day, after an enema of turpentine, Epsom salts, glycerin and water, given through a soft rectal tube, pressed up into the colon. Threatening symptoms at once subsided, and the patient made an uncomplicated recovery.

At the present time, five months after the operation, she has gained (11) eleven pounds, has done her own house-work, which she has not done for four years, is entirely relieved of pain in defecation, and for the first time in four years, says she is without any pain whatsoever. While her general condition is much improved, she is still markedly anæmic, and to completely restore her to health, much time and improved hygienic surroundings will be necessary. The conditions found, amply justified operation, and the result secured has been most gratifying.

The operator who removed the uterine appendages, and who refused a second operation, is a general surgeon. While he invaded the domain of the gynæcologist to remove the uterine appendages, yet, he overlooked the symptoms pointing to intestinal adhesions and partial obstruction of the bowels—conditions coming within the province of the general surgeon. These facts are of interest, as bearing upon the question of the advisability of general surgeons doing pelvic surgery; and especially of the establishing of departments for gynæcology in general hospitals.

In conclusion, I would urge that while it is prudent and necessary in general to require objective evidence of grave pelvic disease before counseling operation, yet, that there are cases, in which a consistent history of pelvic pain, together with the evidence of disease in the general condition of the patient, and the failure of simpler methods of treatment, requires, that the surgeon should offer to the patient the possible results to be obtained after making an accurate diagnosis by exploratory section.

LAVAGE OF THE STOMACH.*

BY MEFFORD RUNYON, M. D., NEWARK, N. J.

My subject to-night has been chosen in the hope of obtaining the expression of your opinion upon the merits and demerits of a method of treating stomach diseases, which in the hands of many has proved itself of considerable practical importance. My own experience has necessarily been very limited, and I shall attempt nothing further than briefly to state, the literature of the subject I have had at my command, and give roughly the histories of the few cases I have so treated.

Lavage of the stomach was not practised as a routine method of treatment until 1867, when Küssmaul commenced using the ordinary stomach pump with its stiff tube and suction and force syringe, in cases of dilatation of the stomach following chronic catarrhal inflammation. He obtained good results, but many objected to the treatment because of the inconvenience and danger of the instrument used. These objections were overcome by the introduction by Taucher in 1879 of the soft rubber stomach tube in place of the stiff one employed by Küssmaul, and the application of the principle of the syphon instead of the suction and force syringe. Taucher's tube has been modified, but his method of applying the treatment is the one commonly used to-day.

I show you here the instrument which is in in general use at the present time. It consists

*Read before the Orange Mountain Med. Society.

of a soft, flexible, red rubber catheter 30, inches long, ¼ inches in diameter, having near its closed extremity two "velvet eyes." To the open extremity the rest of the apparatus consisting of a glass funnel and a piece of black rubber tubing 40 inches long, is attached by means of a short glass tube. There is a stomach tube sold, against which I would warn you, made of black rubber throughout, open at the stomach end and very flexible. I have attempted to use this instrument on several occasions, but have never been able to introduce it into the stomach. It would invariably curl upon itself in the patient's mouth, and no amount of effort would force it past the pharynx. But the tube I have shown you can almost invariably be passed with little difficulty. These are its advantages. It is cheap, simple, readily cleaned, easy of introduction convenient and safe.

METHOD OF INTRODUCTION.

The patient should be placed in a chair with a straight back, or on a stool, the operator standing in front. The patient's head should be kept *straight*; if flexed or extended, it is difficult to pass the tube into the œsophagus. Many have recommended oiling or greasing the tube before it is introduced, but this seems often to retard rather than facilitate its passage. The taste of the oil, even the sight of the oiled tube, is sufficient to nauseate many. All that is generally needed is to dip the tube into the solution you are about to use; this warms it, and the abundant secretion of saliva induced by the mechanical irritation in passing the instrument, is all the lubricant required. A word to your patient as to the sensations he may expect is advisable before attempting the introduction of the tube, usually the more intelligent persons are those with whom the least difficulty is experienced.

The patient's mouth should not be opened widely, for the muscular effort made in separating the jaws hinders an easy introduction. Pass the tube gradually into the pharynx; as it reaches this point a spasm of the muscles almost always occurs; pause for a moment until this subsides, and then quickly, but not hurriedly, push the instrument on into the œsophagus. If instead of passing readily, the tube curls up in the patient's mouth, it is better to withdraw it and start afresh than to continue ineffectual efforts to pass it. No difficulty is usually experienced after passing the pharynx until the stomach is reached; here the irritation of the tube against the collapsed walls of the organ often induces severe efforts at vomiting. A little of the solution you are to use, poured quickly into the tube, separates the walls of the stomach, thus removing them from the cause of irritation, and the vomiting ceases almost immediately. When the tube has been well introduced beyond the cardiac opening, the liquid should be poured in. Holding the funnel above the level of the patient's head, the operator should allow the solution to flow in until the patient, by a sign previously agreed upon, complains of a sensation of fullness, when the funnel is depressed quickly before the last of the liquid has left it, to a level below that of the stomach. This converts the tube into a syphon and the organ is quickly emptied. Usually little difficulty is met with in removing the stomach contents by means of the syphon. Occasionally bits of undigested matter or mucus clog the tube, but these can generally be removed by allowing a little more liquid to flow in. If this method should fail to clear away the obstruction, it may be necessary to remove the tube and cleanse it. The quantity of liquid used at any time will depend entirely upon the case under treatment. It will vary from a pint to several quarts. The most I have ever been able to use in any case has been two and a half quarts, and this in one of dilatation, the result of chronic catarrhal inflammation. The quantity removed should always be compared with that introduced into the stomach. A great variety of solutions have been recommended for use in lavage of the stomach. The one selected will depend upon the object the physician may have in view. If the desire is simply to cleanse the organ, or to remove its contents for diagnostic purposes, plain water, warm or hot, is best. Indeed in the great majority of cases water is all that is needed. Occasionally, when there is a good deal of fermentation going on in the stomach antiseptic solutions of boric acid, resorcin or carbolic acid seem to give better results than water alone. Bicarbonate of soda, in solution, or any of the simple alkalies are sometimes used to advantage. If, where there is a good deal of pain and irritability of the stomach, subnitrate of bismuth be suspended in water and the solution allowed to remain in the organ until the bismuth settles, great relief is often obtained.

The most convenient time to practice lavage, as a means of treatment, is in the morning before the injection of food. I say as a means of treatment, for if it be employed for diagnostic purposes, it is often better, and

after food has been taken in this way, it is possible to determine how well the stomach is digesting any special article of diet. In practicing this treatment in my office it has been my custom to advise patients to take a glass of hot milk early in the morning, at least three hours before coming. This I have found is sufficient to stay the stomach while it does not in any way interfere with the process of washing out. The length of time it is necessary to continue this method of treatment will, of course, vary greatly in different cases, a single application may be all that is required in an attack of acute indigestion, while in long-standing cases of an inflammatory nature it may have to extend for months and even years. Where it has to be continued for a long time, it is not necessary for the physician to carry it on himself. After a week or two of practice the patients learn to do it quite as well, and a tube may be entrusted to them with instructions how and when to use it. I have at the present time several patients who are washing out their stomachs one or more times each week, and doing it apparently with as little concern as they would wash their faces or brush their teeth.

In what cases may lavage of the stomach be used? I have already stated that when Küssmaul first introduced the treatment it was employed only in cases of dilatation of the stomach following upon a chronic catarchal inflammation, and it is still in these cases that it is most frequently employed. But the last few years have given it a far wider range of application, until, at the present time there is hardly a disease of the stomach in which it has not been used. Acute indigestion, or dyspepsia, chronic dyspepsia, alcoholic gastritis, ulcer of the stomach and cancer have all been treated in this way, and with satisfactory results. I have known even of a case of that so-called disease, nervous indigestion, miraculously cured by a few applications of the gastric syphon. How much moral effect had to do with the cure, I am not prepared to say, but it relieved me of the fast becoming obnoxious presence of my patient, besides bestowing upon me her warmly expressed gratitude.

In the stomach diseases of children it is fast becoming a well recognized means of combatting successfully these dangerous symptoms which arise so suddenly, and often terminate so fatally. Seibert has studied its use in over 500 cases having used it in acute gastritis, cholera infantum, acute indigestion, chronic dyspepsia. He reports most satisfactory results. Taucher has recommended its use in very young infants, and reports a case of a child 27 days old, where there was persistent vomiting accompanied by constipation and extreme emaciation; prompt and permanent benefit was obtained by washing out the stomach.

Leo has reported over two hundred cases in children treated by lavage, and his experience has been very favorable to its use.

I could occupy much of your time to-night in describing the cases and the results obtained by those I have mentioned, but to most of you it would simply be repetition.

I have described to you briefly, gentlemen, this method of treatment. I have used it myself in about 40 cases, embracing acute dyspepsia, chronic dyspepsia, chronic catarrhal inflammation, with and without dilatation and ulcer of the stomach; with a very few of these I have used it only once, the patients disappearing never to return. Whether a miraculous cure was effected, or the patients were disgusted with the treatment I have never been able to determine. These, however, have been the exceptions. With the rest, I have found it convenient, easy of application, not markedly unpleasant to the patient, free from danger, and accompanied by the most gratifying results. In the light of this limited experience, I am free to say, that in no other single method of treating stomach diseases have I found as much satisfaction as in this.

ANTISEPTIC TREATMENT OF WOUNDS.[1]

BY H. J. WARMUTH, M. D.,

SMYRNA, TENN.

Nothing delighted the sight of the old-time surgeon so much as the appearance of healthy pus in wounds, while to-day we endeavor not only to prevent suppuration, but at the same time to reduce all wounds, as it were, to a condition of subcutaneous injuries, in order to induce healing by primary union.

We are taught that suppuration is only various forms of fermentation, or of bacterial growth, and that wound fever, erysipelas, pyæmia, etc., are not accidents, or owing to a vitiated constitution, but are due to germs imported into wounds from without. Antisepsis is the gospel of absolute cleanliness, hence antiseptic surgery requires that anything coming in contact with a wound, should be perfectly free from germs, there-

[1] Read by title before the Tennessee State Medical Society, April 14, 1891.

fore the surgeon's hands, especially his fingernails, instruments, sponges, dressings, etc., should be aseptic, in order to keep wounds free from suppuration.

There are many in the ranks of the profession to-day who are skeptics, or do not pay any regard to the antiseptic management of wounds, either from ignorance of the details or from a desire to follow the lead of a few eminent surgeons. We must not forget, however, that Lawson Tait is one of the quickest and most successful operators on record, and that in all his operations, wound surfaces are exposed to the action of the air but a minimum of time, and while he discards all antiseptics, yet he insists upon the most scrupulous cleanliness in his own behalf, and also on the part of his assistants and nurses, before, during and after each operation. A disregard of antiseptic principles has been productive of very serious consequences to patient and surgeon. Suppose we were to perform an amputation, and dress the stump according to ancient usage? Removing the first dressing we will probably find suppuration, afterwards, perhaps, sloughing. After a tedious siege the patient recovers and consults a lawyer. The result will be a suit for malpractice. The Court will hold, that wounds under antiseptic management will heal without suppuration, hence a disregard of this system renders us guilty of wilful negligence, and we are therefore liable for damages.

In the treatment of wounds it is necessary to adopt some kind of a plan, in order to procure the best results, and while it is not necessary to use the cumbersome Lister spray, or to use so many different antiseptics, it is desirable to have a few on hand, in order to meet any cases of emergency. A few antiseptic tablets, antiseptic powders, a bottle of carbolic acid and iodoform, are really the only antiseptics needed. In addition we need aseptic catgut or iron dyed silk for ligatures or sutures, absorbent cotton, antiseptic gauze, rubber adhesive, assorted tubes for drainage and a few roller bandages. The antiseptic tablets (Sharpe and Dohme) are composed of bichloride of mercury 7.3, and ammon-chloride 7.7. Dissolved in a pint of water we have a solution of 1-1000 for cleansing the skin before operating. For small sores we use 1–3000, for larger wounds, 1–10,000, and for large joints, or the peritoneal cavity, 1–21,000. This is the most powerful germicide known. Antiseptic powders are composed of boracic acid, gr. jss, and salicylic acid, gr. xvj each. Dissolved in a pint of warm water, we have Thiersch's solution, which is milder than either the bichloride or carbolic solution. The rule is, the less irritation consistent with a thorough germicidal treatment, the better will be the chance of primary union.

Carbolic acid is also an effective germicide in 1–500. For surgical purposes we use 1–30 or 1–40. Iodoform is used as a dressing.

The application of antisepsis to a proper management of wounds depend upon wounds themselves. Small incised wounds require first, to check the hæmorrhage. If the vessels are of small size, torsion will suffice; if of larger size a ligature will be needed. Should hæmorrhage, however, have ceased, then we proceed to cleanse the surface by allowing a gentle stream of warm Thiersch's, or a weak carbolic, solution to fall upon the wound, either from a sponge or a fountain syringe. Particles of dirt or sand may be removed with forceps or a small pledget of absorbent cotton, previously dipped in an antiseptic solution. After thoroughly cleansing the wound, we dry the same with absorbent cotton, approximate the edges closely, and introduce our stitches. In this kind of wounds we do not anticipate suppuration, therefore drainage will not be necessary. After the surface has been dried, we dust iodoform all over the line of incision and wash off the excess. In a few minutes this line is covered by a crust of iodoform, which is insoluble in water. No other dressing is needed. In a few days raise the edge of the crust, cut your stitches, remove the crust, and your wound is healed. In amputations or other large operations, however, it requires three basinsfull of bichloride solution; one for sponges, one for ligatures and sutures, and the third for the purpose of continued irrigation, before, during and after the operation. Instruments require a carbolic solution 1-40 to render them aseptic. After drying the surfaces and introducing the necessary stitches, dust iodoform all over the line of incision, and begin to dress the stump by applying a silk protective over the wound, and as long as it remains green the wound is aseptic, but as soon as it changes to black it has become septic. Most surgeons, however, have discarded the protective and proceed to apply 5 to 8 layers of antiseptic gauze moistened with the antiseptic solution. The gauze then is covered carefully by a piece of rubber tissue, thoroughly immersed and disinfected in the bichloride solution. Some prefer either oiled silk or mackintosh cloth, but anyway the tissue or any of them should overlap the gauze by several inches on all sides. The

whole is held in position by a few turns of a roller bandage, and this dressing may be left untouched for several days. The thermometer forms a very valuable guide as to the time of changing the dressing. A rise of temperature of 101° is an indication to change, whether the patient complains or not. After the first dressing has been removed, we proceed to thoroughly irrigate with the antiseptic solution as before, and to apply another dressing similar to the first. Where we expect more or less necrosis, however, we must provide for its removal by means of aseptic drainage tubes. They should be brought out at the most dependent part; holes are cut in the strip of antiseptic gauze for the ends of the drainage tubes to pass through. When to remove these tubes depends upon circumstances, from a few hours to three or four days and even longer.

While the above named antiseptics will prevent suppuration, we possess another agent, which will not only sterilize a suppurating wound but will also stop suppuration abruptly. Peroxide of hydrogen (H_2O_2) will pursue pus through the most tortuous passages into the remotest recesses and destroy pyogenic and other micro-organisms. I have employed a 15 vol. solution (Mallinckrodt, St. Louis) in carbuncles, bone felons, etc., very successfully by injecting the cavities with a small glass or rubber syringe, waiting until the foaming ceases and injecting again until the solution fails to bubble. I then apply an antiseptic dressing. The peroxide has been used by others with success in abscesses of the brain and breast, ozæna, gonorrhœa and other suppurating cavities. A close contact with metals, however, will decompose the peroxide.

I sincerely trust that the short method of treating wounds antiseptically, described in this paper will be found not only easy of application, but will, also, by observing results, prove efficient in the management of wounds.

EMPLOYMENT OF PILOCARPINE MURIATE IN LABYRINTHINE DISEASE, WITH REPORT OF CASES. *

BY S. MACCUEN SMITH, M. D.

PHILADELPHIA.

Our object in calling attention to the following interesting cases is, as far as possible, to determine the diseases in which pilocarpine may be of decided benefit, and, if possible, to add to its sphere of usefulness.

CASE I.—Mr. F. W., of New Jersey, twenty years of age, has been a bright scholar until within the last two years, when, on account of progressive loss of hearing, he was compelled to leave school and seek medical aid. From a critical examination of the patient, and also of his parents, the personal and family history were pronounced unusually good. The father gave positive assurance of being entirely exempt from any previous specific history, and certainly observation would substantiate his statement, as his entire family of seven children showed impressive evidence of good health.

The patient stated that he had been under treatment for three years with several specialists in neighboring cities, only to meet with discouragement, as his hearing continued to grow worse.

On examination the external ear and canal were found to be normal; membrane tympani slightly opaque and retracted, otherwise normal, except some inflammation the extent of the manubrium mallei. In the post-nasal space the pharyngeal tonsils were found to be much enlarged, the hypertrophy extending beyond and occluding each Eustachian tube. Very low notes of both ærial and osseous conduction of sound were perceived in each ear—the higher notes not being heard except when intense—which would seem to prove that the internal ear was at fault; and as the voice could be heard much better than the watch-tick, this would offer additional evidence of internal ear disease. By my watch, which measures fifty inches, the hearing distance of R. E. $=\frac{1}{2}$; of L. E.=quite negative; and yet ordinary conversation from the bass voice could be heard at six feet, but individual words could not be distinguished until the sound-wave was intensified.

By removing the enlarged tonsils and post-nasal adenoid growths, the hearing power was somewhat increased by equalizing the atmospheric pressure, and thus to an extent correcting the retracted condition of the membrana tympani. Knowing this patient to have been under special treatment for some time, and that the usual methods of procedure had failed to give relief, we deemed a repetition of the same to be a useless experiment, and therefore concluded to place him under the pilocarpine muriate treatment, by hypodermic injections. As the object of such treatment is to produce profuse diaphoresis, the dose to be employed must be in accordance with individual idiosyncrasy. It

* Read before the Philadelphia County Medical Society, June 24, 1891.

has been our custom to commence with a small dose, one-sixteenth to one-eighth grain, and gradually increase, until the full physiological effects of the drug are produced, provided contra-indications (*to be determined by previous careful examination*) do not manifest themselves.

The dose usually employed is one-sixth grain, although one-fourth grain is frequently necessary. In view of the danger to life that is possible to occur in administering full doses of pilocarpine, Dr. Lawrence Turnbull and other authors, advise the use of atropine or strychnine in conjunction with pilocarpine. This is certainly a proper and safe precaution, and should be employed in selected cases; yet, in the greater number of cases, the writer does not find this essential.

As patients cannot usually stand the daily injection, it is our custom to administer one hypodermic every second day; always *insisting* on the patient remaining in *bed* from three to five hours after each treatment, as the perspiration continues for that length of time, and any undue exposure or exertion may produce unfavorable symptoms. These hypodermics are continued until five, eight, or ten have been given, and, if additional ones are required, they may be administered at intervals of five to ten days, at the symptoms indicated.

We will now relate the treatment and improvement of the case in question, the details of which are purposely given, as they are intended to express in main the general treatment and improvement of the subsequent cases; the points of difference, however, will be mentioned in each case.

February 2, 1889, we gave the above case the first hypodermic of one-eighth grain (the hearing distance, you will remember, was R. E. $\frac{1}{4}$, L. E. negative); next day patient thought tinnitus was much less severe; no improvement in hearing; perspiration not profuse. February 4th, gave hypodermic of one-sixth grain, which caused copious diaphoresis, some nausea, and headache. During that evening patient heard wagons passing his window, but could not hear the music from some stringed instruments only fifteen or twenty feet away; his hearing for conversation had materially increased; tinnitus about the same watch-tick, R. E. $\frac{2}{4}$, L. E. $\frac{1}{4}$. It is interesting to note the marked improvement in left ear, which up to this time had been negative.

6th. We repeated hypodermic injections of one-sixth grain, as we found this to produce full physiological effect; perspiration about the same; absence of nausea and headache. The next day patient called and stated his hearing had never been so bad, he being unable to hear anything except very intense *high* notes; he was, therefore, much discouraged; all his previous hopefulness having vanished, he refused to submit to further treatment. However, he called the following day and informed me he would continue treatment, as "he thought nothing could possibly make him worse." The peculiar effects of this last hypodermic were the almost entire loss of hearing and the change to perceiving *only high* notes.

8th. One-sixth grain was again given, which resulted in the hearing being restored to R. E. $\frac{3}{4}$, L. E. $\frac{3}{4}$; tinnitus almost gone; feeling much better in general health and spirits.

10th and *12th.* He received one-sixth grain, with marked improvement in hearing; R. E. $\frac{9}{4}$, L. E. $\frac{11}{4}$; no tinnitus; general health continues to improve.

At this date patient's father called to be treated for "some fever blisters on tongue and throat," which, on examination, presented such questionable appearances that I, without hesitation, pronounced them syphilitic. He then admitted having had a chancre when twenty years old (his age at this writing being forty-nine). His excuse for previous false statements was, that every physician whom his son had heretofore consulted questioned his family history, and a confession on the part of the father invariably resulted in the son being put on large increasing doses of iodide of potassium and mercury, which so impaired his health that the treatment was discontinued; and as his son had never improved under such medicament, he concluded to conceal his family history, with the hope that other methods of treatment might be pursued.

Granting that the patient's impairment of hearing was specific in origin, in view of his marked improvement I thought it wise to continue with the pilocarpine treatment, in order to more thoroughly establish its efficiency in this class of cases.

The hypodermics were continued on February 12th and every second day thereafter, until eight had been given, at which time his hearing distance was, R. E. $\frac{28}{4}$, L. E. $\frac{22}{4}$; general health improving daily; his weight had increased seven pounds; tinnitus aurium entirely gone.

21st. The patient returned home, feeling that he had entirely recovered; but in two weeks he called again at my office with hear-

ing somewhat impaired—R. E. $\frac{22}{L}$, L. E. $\frac{26}{L}$—which he thought came from "catching cold," due to exposure. I again gave him three hypodermics, his hearing increasing to R. E. $\frac{36}{L}$, L. E. $\frac{39}{L}$. Additional hypodermics did not improve the hearing. Thinking he required some *specific* treatment, and remembering that iodide of potassium and mercury could not be tolerated by his stomach, I prescribed Hostelley's syrup of hydriodic acid in two-drachm doses, four times a day, well diluted in water; also inunctions of one drachm of ung. hydrarg. each night and morning. This treatment was continued for six months without experiencing any inconvenience, his hearing remaining about the same; no tinnitus; general health better than ever before, and at this writing—about fifteen months since beginning treatment—his hearing and general condition continue to be good, although the patient has not been taking any medicine for the past nine months.

Case II.—Mr. S. G., of Pennsylvania, aged seventy-one years, consulted the writer, with his family physician, July 8, 1888, and gave the following history: On January 6th of the same year, when arising at his usual hour, he was much alarmed at not hearing the customary noise on the street; thinking, however, that his servant had by mistake awakened him at too early an hour, he consulted his watch, and, on finding the hour rather later than usual, and as everything appeared distressingly quiet, he realized that his hearing had been entirely lost during the night. This complete loss of hearing was not attended with pain, tinnitus aurium, discharge from the ears, nor inconvenience of any kind.

After being under treatment for three months, and not receiving the slightest benefit, while drinking some hot milk by the direction of his physician, he was seized with intense tinnitus aurium, vertigo, and constant emesis *without nausea*, but with entire absence of pain. The emesis continued for only three hours, but the tinnitus and vertigo increased in severity.

In this condition the patient consulted the writer. A more despondent and pitiable mortal could not be imagined. He was not able to walk without assistance, and the tinnitus had prevented sleep for almost two weeks. The membrana tympani and the external auditory canal were normal, excepting the changes peculiar to a person of his years; the post-nasal space including the Eustachian tubes, was in good condition; in brief, both ears and their appendages presented the usual normal condition in so far as observation alone could determine. In this connection it is interesting to note the entire absence of evidence of disease in such cases. Osseous conduction of sound was well marked, especially in the left ear; aëreal conduction of sound was quite lost in both ears.

The family physician informed me that his patient had been on large increasing doses of iodide of potassium and mercury, but the stomach would no longer retain the potassium iodide.

We subjected this patient to the pilocarpine treatment, as previously described, with the following results: First treatment resulted in slight decrease in vertigo and tinnitus, but hearing power remains the same; caused some temporary vomiting, which was quite severe for two hours. The second and third hypodermics were given without any appreciable benefit; the fourth and fifth, however, were productive of marked improvement in vertigo and tinnitus, and at the same time caused such changes in the perceptive organs of hearing that he was able to hear intense waves of sound. After the sixth treatment tinnitus and vertigo had almost ceased, and hearing distance increased to $\frac{1}{L}$ in both ears. The seventh and eighth treatments did not produce much change in hearing distance, but entirely relieved vertigo and tinnitus. The nineth hypodermic caused much improvement in hearing: R. E.$=\frac{9}{L}$, L. E.$=\frac{11}{L}$.

The patient found it necessary to return home, and I directed his family physician to continue the treatment until four additional hypodermics had been given, at the end of which time patient called, with this marked improvement: R. E.$=\frac{21}{L}$, L. E.$=\frac{27}{L}$. The patient's business called him to the far West, and required his being away for four months. I gave him Hostelley's syrup of hydriodic acid to take during his absence. On his return the condition of hearing was almost normal, and remains the same at this writing.

As the details of a large number of such cases would consume much time and space, and withal prove tiresome, the object of this paper will have been accomplished by briefly stating that the writer has treated forty-seven cases of greater or less impairment of hearing—some amounting to almost entire deafness—by the method of hypodermic injections of pilocarpine muriate; and that

from his observations in these cases he feels justified in expressing the following conclusions:

That age and sex have no influence on the success or failure of treatment.

That in recently developed deafness with tinnitus this treatment is much more hopeful of success than in cases of longer duration. In one case, however, which was of specific origin, the patient, aged seventy-two years, had been almost deaf for twenty-two years, and yet this was one of the most successful cases treated. Nevertheless, this must be considered as very exceptional.

That cases of chronic suppurative otitis media with some degree of impaired hearing, resulting from the exanthematous fevers, are not proper cases to receive benefit from this method of treatment.

That deafness, vertigo, and tinnitus arising from syphilis seem to be especially benefited by the subcutaneous injection of pilocarpine.

That these results can only be attained by pushing the pilocarpine to its full physiological effect, and that profuse diaphoresis must be obtained in every case.

Special Correspondence.

Paris Letter.

Partial Nephrectomy, Extirpation by Dissection of a Large Cyst of the Kidney, by M. Tuffier.

In the following case reported by the above named surgeon we have union by first intention, of the renal parenchyma in the midst of the urinary liquid, thus proving the possibility of removing benign tumors of the kidney without destroying the function of the organ in question.

In the case of a serous cyst of the kidney, complete nephrectomy or drainage of the tumor is the usual resort. M. Tuffier states that the first method is dangerous, as out of twenty-four (24) operations 11 terminated fatally (45 per cent). The second method is incomplete, as in eight (8) operations, four (4) were followed by persistent fistulæ (50 per cent.,) necessitating a secondary nephrectomy. M. Tuffier's method supported by numerous operations, consists in radically extirpating the tumor, and preserving the kidney. He reports the following case: "A man sixty-four years of age employed in commercial business sought advice in consequence of hæmaturia. The patient entered Beaujon Hospital. The hæmaturia was of twelve months duration, with variable intensity, and accompanied by an exaggerated desire to urinate. The urine was blackish in color, contained some clots, indication of a notable loss of blood, which explained the anæmic condition of the patient. Careful examination of bladder resulted in diagnosis of neoplasm of that organ. Examination by the rectum was negative, and cystoscopy was impracticable. Upon palpation the kidney was found enlarged to the size of head of a fœtus. On the 9th of February I made an incision in the lumbar region. Upon exploration the body of the kidney was found to be normal, the upper extremity presented a prolongation, reaching to a point under the diaphragm, forming a tumor about the size of the fist. This was slowly uncovered, and brought into the field of operation by swinging it behind the 12th rib. I discovered that I had to deal with a large renal cyst, the transparency of which was complete. It occupied only the upper third of the organ, the rest of the gland presenting no alteration. I decided to extirpate the cyst by dissection. An assistant pressed upon the renal pedicle, while I dissected the cyst throughout the parenchyma. I removed in this manner the entire tumor without loss of blood. The opening was closed by passing fine cat-gut sutures through the lips of wound.

"Pressure was now removed from the pedicle. There was no oozing of blood. The kidney was replaced and abandoned in its lumbar abode. The muscles and aponeurosis were sutured in layers, and the skin was brought together by means of horse-hair, without drainage. On the seventh day the horse-hair was removed, and all was ended, as far as the wound was concerned. The hæmaturia continued and I extirpated, twenty days later, a neoplasm of the bladder, by supra-pubic incision. My patient is now well."

The results of nephrectomy or complete extirpation of the kidney, first practised by Wolcott in 1861, and later by Simon of Heidelburg, has not been encouraging, therefore this method by dissection seems to me susceptible of application to the vast majority of benign tumors of the kidney.

Lucia Redding Thompson, M. D.,
Paris, France.

SELECTED FORMULÆ.

PILOCARPINE IN GLAUCOMA.

Drs. Saint-Germain and Valude (*L'Union Med.*) recommend the following:

℞

Pilocarpini.....grs. ivss.
Aq. destil.....f℥ijss.
M. ft. collyrium.

This collyrium is employed alone, or in alternation with a solution of eserine, in glaucomatous conditions of children, when eserine does not agree with the patient.—*The Prescription.*

TREATMENT OF SIMPLE CHANCRE.

In the *Revue Générale de Clinique et de Thérapeutique*, Castel, after pointing out that the danger of this lesion resides in great part in its virulence and in the facility with which re-inoculation is possible, proceeds to consider the best application for its relief. After reminding us of the fact that Ricord habitually employed the charcoal and sulphuric acid treatment for this purpose, and obtained from its use very extraordinary results, he draws attention to the more recent methods of treating the disease, also calling attention to the use of Canquoin's paste. Diday and Fournier recommend the employment of a solution of nitrate of silver, and the latter has found that the application of a 3 per cent. solution produces very excellent results. The lesions should be dressed with a tampon of absorbent cotton dipped in this solution and renewed three times a day. With this treatment simple chancre should be cured in from three to six weeks, and it may be advisable to apply not only antiseptic washes, but oxygen water and solutions of chloral or Labarraque's solution. According to Rollet and Mauriac the following applications are also very useful:

℞

Water..... 6 drachms.
Lemon-juice ..... 1½ "
Laudanum..... 45 minims.
Goulard's extract..... 1 drachm. M.

Or,

℞

Water..... 1 ounce.
Citric acid.....45 grains.
Hydrochloric acid.....45 "
Perchloride of iron.....45 " M.

ATROPINE IN URINARY INCONTINENCE OF CHILDREN.

℞

Atropin. sulphat.....gr j.
Aq. distillat.....f℥j.
M. Sig. Give as many drops as the child is years of age at 4 and 7 o'clock P. M.

—*Therapeutische Monatshefte.*

ANTHELMINTIC.

Iméré recommends the following for children from six to twelve years of age:

℞

Ethereal extract male fern.....gr. xlv.
Syrup Calomel.....gr. iijss.
Distilled water.....f℥iv.
Powdered gum arabic..... ℥ss.

M. S.—To be taken at one dose. Milk diet should be given the preceding day. The worm is usually expelled in from thirty to forty minutes.—*Le Progrés Médicale.*

OINTMENT FOR HÆMORRHOIDS.

Audhoui recommends, in *L'Union Médicale*, the following ointment for hæmorrhoids:

℞

Extract of belladonna.....15 grains.
Extract of thebaia.....15 "
Antipyrin.....45 "
Mercury ointment.....2¼ drachms.
Simple cerate.....1 ounce.

This is to be made into an ointment and applied to the inflamed hæmorrhoids. Rectal injections of warm water are to be employed if constipation is present.—*Medical News.*

FOR THE GRIPPE.

Dr. E. R. Palmer, in a recent number of the *Prac. and News*, says: With the recurring prevalence of the so-called grippe, I beg leave to suggest the following as a specific for adults in such cases:

℞

Salol.....℈ iij.
Phenacetin..... ℈ ij.
Quiniæ salicylat..... ℈ j.
M. Ft. cap. xx. Sig. Two every three hours.

AN EXCELLENT COUGH MIXTURE.

℞

Ammonii hydrochlorate..... ℥ iij.
Morphina sulph .....gr. iij.
Potassii cyanidi .....gr. ij.
Syr. pruni virginiani
Syr. tolu.....aa..... f℥ iij.
Syr. scillae..... f℥ ij.
Aquæ q. s. ad ..... f℥ xij.
M.

Dissolve muriate ammonia, morphine and potash separately in the water and add other ingredients.

Sig. Tablespoonful when necessary, to relieve cough.

The above prescription I have found particularly efficacious in coughs of bronchitis, acute or chronic, affording relief when many other remedies had failed.—*Dixie Doctor.*

GALACTORRHŒA.

℞

Potassii iodidi. gm..... ℥ss.
Syrup raspberry " ..... f℥v.
Aquæ dist. " ..... f℥ij.
M. Sig. f℥ss. three times daily.

—*Braun, L'Union Médicale.*

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The Editor will be pleased to get medical news, but it is important that brevity and actual interest shall characterize communications intended for publication.

LEADING ARTICLE.

THE TREATMENT OF TYPHOID FEVER BY COLD WATER BATHS—OR THE METHOD OF BRAND.

Although this mode of treating typhoid fever has recently attracted considerable attention in this country, it is surprising that in consideration of the favorable results reported, it has not been more widely adopted in private as well as in Hospital practice. However, when we consider the multitude of worthless therapeutic suggestions which fill the columns of medical literature, we are forced to admit that conservatism regarding new methods of treatment is rather to be commended. In the present instance, however, it would appear that because of certain very popular and deeply rooted antipathies to this form of therapeusis, there is danger of its careless or insufficient trial by a large portion of the profession. These objections chiefly are the inconvenience attending its use in private cases, and the alarming symptoms which occasionally arise directly from the cold bath, together with a feeling of distrust of the statistics which prove its usefulness. The last objection is so groundless since observations have multiplied so richly, that it needs no comment. On the contrary, the first two objections are practical ones, and it cannot be denied that in private practice, such treatment will often meet with disfavor from the patient and his friends, or that apparently alarming symptoms do, at times, not follow the cold bath. But the test of the value of the treatment is certainly the effect which it has upon the mortality and course of the disease, and the proof already accumulated in its favor is indisputable.

It is the duty of the medical profession to mould public opinion to views consistent with our positive knowledge of the subject, and when this is wisely done, generally it will be found that popular prejudice will rapidly disappear. In very many instances it will be found that the patient strenously objects to the disagreeable exertion required in the exercise of the bath, and only a wise

firmness on the part of the physician and attendants, will enable the faithful performance of the treatment. These are the purely practical objections which have to be overcome. Theoretically, the method of Brand is opposed to our old ideas of the treatment of typhoid fever. The movement and exertion required of the patient is totally at variance with common practice, and at first sight it seems actually cruel to so disturb the sufferer; but, taking into account the results obtained, there can be no doubt that the duty of the profession is to give it a fair trial.

For the benefit of those who may not be perfectly familiar with the method of Brand we quote the following description of it from an excellent paper: ("The treatment of enteric fever, with special reference to the method of Brand," by J. C. Wilson, M. D., Physician to the Jefferson College Hospital and the German Hospital, Phila. Read before the Lycoming county Medical Society, Williamsport, Pa. Nov. 4th, 1890. *Med. News*, Dec. 6th, 1890) by Dr. J. C. Wilson, of Phila. He says: Whenever the temperature taken in the rectum reaches 103.2° F. (39° C.) the patient is placed in a bath of 65° F. A compress, wet with water about five degrees lower, is placed upon the head, or water of a lower temperature is poured upon the head and shoulders. The patient remains in the bath fifteen minutes, during which time he is systematically rubbed by the attendants and encouraged to rub himself. At the expiration of this time he is removed from the bath, and wrapped in a coarse linen sheet over which a blanket is folded, the extremities being thoroughly dried and rubbed. A little wine or spirits is then given. This is repeated every three hours, unless the temperature remains below 102.2° F. The alimentation is liquid, nutritious, and carefully regulated. No drugs are administered."

This briefly and clearly outlines the technique of the treatment, and for a fuller account of the exact application of this systematic remedial procedure, the reader is referred to the complete outline of it, as contained in Dr. Wilson's paper, being quoted from Glenard, (*Le Bulletin Médicale*, Feb. 26, 1888,) who also says: "Alimentation should consist of the following articles: Milk, diluted with coffee or tea or cocoa, (a quarter of a litre at each administration;) thoroughly cooked gruel, oatmeal, tapioca, or vermicelli; veal, mutton, or chicken-broth, freed from fat when cold and re-heated at the moment of administration. As a drink, pure cold water should be given; the indication for wine or spirits is urgent only in cases that are subjected to this treatment late in their course."

Such, then, in brief, is the method of Brand, and so harsh does it appear, when contrasted with our ordinary treatment of typhoid fever, that only the most absolute proof of its beneficient action can convince the novice that it is entirely rational. It presents a most striking contrast to the expectant method of treatment, and to all the other modern modes of dealing with this disease, such as by antipyretic and antiseptic drugs.

What proof is there that the method of Brand is better than these? Since the paper of Dr. J. C. Wilson is the most complete we have seen upon the subject, we will quote, for the benefit of our readers a few of the statistics he has so admirably collected together, conclusively proving the reduction of the Hospital mortality of typhoid fever under the use of the cold water bath. Thus, in the combined number of cases treated in London Hospitals under other modes of treatment than cold water baths, the mortality, from a total of 13,936 cases, was 17.8 per cent., and in 27,031 cases collected by Dr. Murchison, 17.45 per cent. were fatal. Jaccoud found that 19.23 per cent. of 80,140 cases collected from European Hospitals, were fatal. Of 17,000 cases treated in the General Hospital of Vienna, the mortality was 22.5 per cent. In the English army the death rate varies from 24 to 40.7 per cent. Of 307 cases treated at the Mass. General Hospital, 13.5 per cent. died. The death-rate during our late war was 35.9 per cent. among white troops, and 55.6 per cent. among colored troops. In New York Hos-

pitals the mortality from 1877 to 1883 varied from 20.1 to 30 per cent. The foregoing cases were all treated by expectant or symptomatic modes of therapeusis.

Brand collected 19,017 cases treated by cold baths, only 7.8 per cent. of which died; and Vogl's mortality from 1875 to 1881, with 702 cases, was 7.6 per cent., the treatment being baths and internal antipyretics.

Following these are statistics of strict cold water bathing: Tessier, 139 cases in 1887, with 5 per cent. fatal; Vogl, 420 cases, treated in 1880, 2.7 per cent. fatal; 141 cases from 1882 to 1887 gave 3.5 per cent; Brand, 2,198 cases, all treated by strict cold baths, 1.7 per cent. died, and omitting those not treated before the fifth day, the same figures give 2,150 cases, without a single death.

The above figures, are abstracted from a large number of the statistics found in Dr. J. C. Wilson's paper, certainly give us food for serious thought. The same author gives an interesting table of the mortality in 1889–90, in some of the chief Philadelphia Hospitals, where the cases were treated by expectant, symptomatic or antipyretic remedies, and the mortality varied from 12.5 per cent. in the Episcopal Hospital to 26.6 per cent. in the St. Agnes Hospital. At the Pennsylvania Hospital it was 16.1 per cent., while fifty cases treated by Dr. Wilson, at the German Hospital, gave a mortality of 2 per cent.; ten of these cases were treated with carbolized iodine, and the remaining 40 cases were treated strictly by cold water baths, the only death occurring being one of the number treated by carbolized iodine, so that of 40 consecutive cases treated by the cold water baths, all recovered. Dr. Wilson states that "severe symptoms were mitigated, and mild cases ran a most favorable course," and he also remarks that he modified Brand's method in two particulars: (1) "He took the temperature in the mouth instead of in the rectum. (2) Each case admitted prior to the tenth day, received one or two laxative doses of calomel."

Thus, we have seen from the figures quoted, the large degree of confidence which the strict cold bath treatment has inspired in different countries. To read some of the reported experiences, one would almost be inclined to the belief that it should always be adopted in any stage of the disease or condition of the patient. But the indication from available statistics, is, that the best results follow its early use in sthenic cases of the disease. There seems every reason for avoiding its use in the cases where the patient is not seen until the second or third week of the disease, and not even the brilliant array of statistics can yet convince us, that it is a wise procedure when there are grave pulmonary, cardiac or renal complications. Given a case in the third week of typhoid fever, with unusually deep ulcers almost ready to perforate, the conclusion is inevitable that the *strictly applied* system of Brand would be a dangerous treatment.

Any new treatment of undoubted value is universally too widely and indiscriminately applied without sufficient attention being paid to the selection of proper cases, and no doubt the proper limitations will after a while be found, within which this system of practice can safely be used. The inclination to doubt statistics is not without some reason when it is remembered that they rise and fall considerably in different periods, without reference to the treatment employed. From 1868 to 1882, in the Hospitals of Paris, the mortality was 21 per cent., from 1882 to 1888 it fell to 13 per cent., and in 1889 it rose to 14 per cent., irrespective of the mode of treatment. (Merklem, "The treatments and the mortality of typhoid fever in the Hospitals of Paris," *Bull. et. Mem. de. la. Loc. des Hosp.*, July 9th, 1890, p. 628.) Also, there is a marked difference in the two sexes, the mortality for women being higher.

While Dujardin-Beaumetz speaks in favor of the cold bath, (*Therapeut. Gaz.*, January 15th, 1891,) he prefers in his own Hospital practice, lotions, wet packs and tepid baths, and claims as good results as are obtained from the strict system of Brand. He further says: "I am a thorough opponent of systematization * * * For a disease

like typhoid fever, which presents itself under the most variable forms, we cannot admit a therapeutic formulæ which applies indiscriminately to all cases, and our treatment should vary according to the patient we have before us." The same eminent authority says: "I obtain with these tepid baths sedations of the nervous disturbances a sufficient fall of temperature, a state of freshness of the skin and general comfort, which enables the patient to get the needed rest." (*Ther. Gaz.*, January, 1890.)

Other papers giving very favorable testimony regarding the therapeutic value of cold baths in typhoid fever are available, and we might especially mention several of interest, including one by Dr. Sihler (*Cleveland Med. Gaz.*, 1890, VI., p. 193–208,) and two others, (*Jour. Am. Med. Assoc.*, 1891, XVI., 369, and *Practitioner, Lond.*, 1891, XLVI., 161–184,) but as they contain the same sort of evidence we have already referred to, we will leave their perusal to the interested reader.

While, from the evidence before us, the method of Brand has apparently lowered the mortality of typhoid fever more than any other single mode of treatment which we are aware of, still repeated experiences with it are in order so as to establish its exact value, and the best way of application of the cold water. So many conditions influence the course, duration and death-rate in this disease, (such as climate, season, and the physical and social status of the patient) that more statistics of undoubted veracity are needed to help us decide wisely regarding its true value. From the most encouraging reports which have followed the use of antiseptics in this disease, especially with the idea of influencing local conditions of the intestines which mitigate against the patient, we should think, that the combination of the local antiseptic treatment with the method of Brand should yield good results. If it is proven that the action of *cold* abolishes all those general symptoms referable to conditions of the nervous and vascular systems, under the stress of the bacillus of Eberth; and if it is equally proven that the maintainence of intestinal antisepsis removes all those dangerous local symptoms more effectually than other modes of medication, is not the inference that a combination of these two therapeutic measures would enhance their separate value, a natural one? However enticing such a theory may be, we are inclined to agree with Professor Dujardin-Beaumetz when he says in effect that any iron-clad system of treating typhoid fever is impossible, and that just as the disease now presents one indication and anon another more or less different and important, so should our remedies differ as we appreciate the demand of each case. The addition of the application of higher degrees of cold, than we have used for many years, is undoubtedly an advantage, but it will be a greater one when we know exactly how and why cold does good, and, therefore, be better prepared to wisely administer it.

Finally, we would bespeak for the cold bath treatment the earnest consideration, and the careful trial, which the importance of the subject demands. The saving of ever so few lives in every hundred cases means many thousands of lives of use to the world, and it is to be hoped that the system of Brand, if not perfection itself, will at least aid us to know more perfectly to what extent cold can favorably influence the course, duration, sequelæ and mortality of typhoid fever.

CORRESPONDENCE.

CLEANLINESS IN SURGICAL OPERATIONS.

(*Correspondence between Dr. Hiram Corson, of Plymouth Meeting, Pa., and R. Stansbury Sutton, of Pittsburgh, Pa.*

PLYMOUTH MEETING, 7–8–91.

DEAR DOCTOR SUTTON:

Thanks for your pamphlet, on "The Importance of Cleanliness in Surgical Operations." I have carefully read it. The profession is much indebted to you; for you were one of the first to show that it was not the carbolic spray that was the preventive of danger and death in abdominal operations—but that cleanliness was the essential. I have much pleasure in believing that the surgeons in America are as skilful and suc-

cessful as any others in any country; and since the issue of your paper years ago, have held you up as one who could reach success without other antiseptics than the cleanliness obtainable by the use of simple unmedicated water—but I have been confronted by the fact, urged against me, that you carbolized your instruments—I have regretted, and still do, that you did not try what could be done with merely using water in which to lay your instruments and for all other purposes. I feel sure that you would have been equally successful. On p. 8, speaking of Prof. Schröder, you intimate very plainly that the hazard of his operations is greatly lessened by the fact that "the peritoneum is but little exposed to the spray." But why did you not add, in your facile way of putting things, that he ought not to *endanger* his patients by even a weak spray. Don't you believe that any use of the antiseptics in contact with the peritoneum is dangerous? You do not, for on p. 9, you say, that "where hospital surroundings are not pure, it will be well to follow the antiseptic method." You do not doubt Lawson Tait—but do not go so far. I wish you would try cleanliness and nothing else. But on p. 10, you say: "There *are* many surgeons who no longer use Listerism." Why then use it at all? You properly give Lister credit for doing that which led to cleanliness, and I never wish to lessen in the least the honor accorded to him, but you admit that death has been caused by some of the antiseptics, but never by cleanliness. Would it not be safer to have the ligatures "submerged" in water, than in "a five per cent. carbolic acid?" The ligature touches the peritoneum. "In Europe, Listerism and cleanliness accompanying it, is seen everywhere." But do you think it necessary? Almost, No—I wish you could no without the *almost*.

We owe you much my Dear Doctor, but I do want you to put us under still further and greater obligations by proving to the world that cleanliness—the cleanliness that can be obtained by the use of water—is safer than cleanliness and Listerism combined. You have, doubtless, seen my paper on "Antiseptics in Mid-wifery." It is a paper that was written for our Society—the County Society—and without any expectation that it would go further. I could have made it stronger perhaps, but I am so old and forgetful now, that I ought not to write at all, not even this letter. If you have not seen it I will send a copy. I shall be most happy to read whatever may hereafter fall from your graceful pen. With kindest regards, sincerely your friend.

HIRAM CORSON,
Plymouth Meeting P. O., Pa.

PITTSBURGH, PA., July 11, 1891.

My Dear Dr. Corson:—Your kind letter of the 7th inst. is to hand. It was with great interest that I read your paper on "Antiseptics in Midwifery" in a recent journal. Facts are stronger than theories. In your letter just received, commenting upon my paper, "Importance of Cleanliness in Surgical Operations" read before the American Gynæcological Society at their meeting eight years ago this Autumn, you say that you have been confronted with the fact that "you carbolized your instruments." To assure you of that support, which you fear is not to be found, in my practice with reference to carbolic acid, I am glad to say, that for *eight years no carbolic spray has been used over any wound which I have made. No carbolic acid or other chemical has been used in the water covering my instruments, during operation, or been introduced into the sponge, water or overhead flushing bag during the same period. I have not carbolized a ligature for five years. The last carbolized ligature which I placed upon a pedicle came through the abdominal wall three months after the operation; it had been boiled in a five per cent. solution.* Eight years of constant experience have elapsed since I wrote my paper. Now I can say, that I know of no chemical solution which can fail to be injurious if introduced into the cavity of the abdomen, and that pure water at a moderate temperature is all that is required. After I close an abdominal wound I put on a top dressing of thymol or iodoform gauze, first having sponged off the surrounding skin with 1–2000 mercuric solution. Pin on a bandage and let it go for a week. Probably this chemical top dressing is not needed, but gauzes are clean and aseptic. The chemical is outside of the body, *where it ought to be*, and simply guards the open gate way. In total extirpations of the uterus I have deviated from my habit in abdominal sections. In the total extirpations, I have operated with the patient on her back, the trunk of her body, above the pelvis, elevated, and the pelvis still *further set on end* by a roll three inches in diameter placed under the small of her back. During the extirpation, a stream of 1–5000 mercuric solution has been playing into the vagina, and after the operation was completed an iodoform tampon has been put into the

vagina. In this position no fluid runs upward into the peritoneal cavity. But I should have said that in my last total extirpation the solution was 1–10,000. Do you observe, my dear doctor, the tendency to get rid of the chemicals here also? I will do it. The Listerian technique so far as it pertains to chemicals is abandoned, so far as it presages the importance of cleanliness it is retained, in my work, with the exception referred to. The results obtained in abdominal surgery under this seclusion of the Listerian technique have been good, by far the best ever obtained by any other operator in this city.

My institution, Terrace Bank Sanitorium, has just completed its eighth (8) year. It will reopen September 1st. With kind regards, and the hope extended that you may be spared to see the bacillus, only the little tail of pathology, made less of,

I am sincerely your friend,

R. STANSBURY SUTTON.

BOOK REVIEWS.

PHILADELPHIA HOSPITAL REPORTS. Volume 1. Edited by Charles K. Mills, M. D., Member of the Neurological Staff, Philadelphia, 1890.

We hail with pleasure the appearance of this, the first volume of the Philadelphia Hospital Reports. In an institution of such magnitude as Blockley, with a staff of physicians, surgeons, obstetricians, neurologists, optholmologists, dermatologists, pathologists, bacteriologists, etc.; each member of which, is an authority upon his special branch, the opportunity for valuable clinical study cannot be overestimated, and it is important for three reasons that such work shall be recorded in annual reports. In the first place, it encourages the members of a medical board to do more scientific work and study; secondly, the profession at large, is benefited by the experience gleaned from the pages of such a volume, and finally, the Hospital's interests are advanced both by the better records made and the wider knowledge given the public of the institution's work.

Abroad it is the general custom for the large Hospitals to publish annual reports, and the published volumes are replete with useful knowledge and with statistical and other papers, which have been quoted over and over again in medical works of the highest standard.

In the present initial volume of these reports, considerable space has been devoted to the history of the Hospital. Contributions in this line are furnished from such well-known writers as: Dr. D. Hayes Agnew, Dr. Alfred Stillé, or Lewis P. Bush, Dr. Chas. K. Mills and Dr. Roland G. Curtin. Valuable papers have been furnished by:

Drs. Roland G. Curtin, James B. Walker, J. H. Musser, F. P. Henry, W. E. Hughes, J. M. Anders, S. Solis Cohen, Wm. G. Porter, John B. Deaver, Ernest Laplace, E. E. Montgomery, Clara Marshall, Barton Cooke Hirsh, Edward P. Davis, Henry F. Formad, J. L. Hatch, Chas. K. Mills, F. X. Dercum, W. J. Hearn, Wharton Sinkler, T. J. Harris, C. S. Bradfute, J. H. Lloyd, A. J. Smith and G. E. de Schweinitz.

An interesting contribution from Dr. Roland G. Curtin is worthy of special note as bearing upon the history of epidemic diseases. It is entitled "Epidemics in the Philadelphia Hospital from 1862 to 1890."

The book is illustrated.

We earnestly hope that the Philadelphia Hospital authorities will continue the good work, so auspiciously begun, from year to year and we further wish that the example thus set, may soon be followed by the other large Hospitals in the United States.

THE MODERN ANTIPYRETICS: THEIR ACTION IN HEALTH AND DISEASE. By ISAAC OTT, M. D., Easton, Pa.: E. D. Vogel: 1891.

This little *brochure* comprises within its fifty odd pages considerable new and interesting information as to several of the new chemical compounds that are being offered to the profession for their antipyretic value. Within this small compass the author has given a description of his human calorimeter, a study of the calorimetry of malarial fever, some important notes on the chemistry, physiological and pathological action, and on therapeutics of those coal-tar products that are of the class in question, and lastly, an interesting chapter on the "Value of Antithermics in Typhoid Fever."

Dr. Ott says "My experimental researches lead me to believe that fever is due to an agent from within or without, which deranges the harmony of the thermotaxic, thermogenetic and thermolytic apparatuses, by which, in the initial stage the metabolism of the tissues is usually temporarily increased, and this increment is usually greater than that generated upon a restricted amount of nutriment."

Those interested in the study of the relations between body temperature and disease will certainly find the volume highly entertaining, whether they agree with the author in his conclusions or not.

PERISCOPE.

THERAPEUTICS.

THE USE OF COCAINE AS AN ANÆSTHETIC.

At a meeting of the Acadèmie de Mèdecine, on May 12th, the report of the commission appointed to consider M. Hallopeau's communication on cocainism (see supplement, December 13th, 1890, p. 84), was presented by MM. Panas and Magitot (*Bull. de l'Acad. de Méd.*, 3me Série, t. xxv. No. 19). After a review of the literature of the subject—confined almost exclusively to French sources—they cite the experience of M. Paul Reclus, who has performed more than 1,200 operations (removal of tumors, hydrocele, excision and erasion of joints, laparotomy, gastrostomy, strangulated hernia, etc.) without accident. M. Reclus finds that for mucus membranes the application of cocaine to the surface is sufficient, but if more profound anæsthesia is required it should be injected, not hypodermically, but intradermically. Care must be taken not to inject any of the drug into a vein; the injection should be made slowly, the quantity never exceeding 10 centigrammes, this amount being used only for extensive operations, and being administered in a series of injections at different points so as to embrace a wide surface. MM. Panas and Magitot, following in great part the teaching of M. Reclus, sum up their conclusions as follows: (1) Cocaine is an excellent local anæsthetic, which should on no account be banished from surgical practice. (2) It should, however, be used with the following precautions: (*a*) The dose should be proportional to the extent of surface it is desired to render insensitive, but should in no case exceed from 8 to 10 centigrammes; (*b*) cocaine should never be employed in persons suffering from cardiac complaints, chronic affections of the respiratory passages, or well-marked neurotic diathesis; (*c*) it should be injected *into* and not under the mucus membrane and skin; a 2 per cent. solution is the best; it should always be prepared fresh and injected with a sterilized syringe; (*d*) the patient should always be in the recumbent position when the injection is given, even if the head has to be raised afterwards; (*e*) the drug should be of the most absolute purity, and in particular free from any admixture of toxic alkaloids; (*f*) it should be given in divided doses, an interval of some minutes being allowed to elapse after the first injection of the first portion; this will give an opportunity of observing whether any untoward effect is likely to occur. (3) Used in this way cocaine has obvious advantages over chloroform, ether, etc., one of the chief being the possibility of operating without assistance. (4) The anæsthetic effect always lasts long enough to allow of the performance of "all the operations of ordinary surgery." In the discussion which followed the reading of the report M. Constantin Paul spoke of the internal administration of cocaine, pointing out that doses of 15, 20, and even 30 centigrammes could be taken in this way without danger. He said the intradermic injection was very painful. M. Laborde, while admitting that much larger doses could be taken by the mouth than could be safely given hypodermically, and that remarkable analgesic effects could thus be produced in cases of gastralgia, etc., and that he had seen serious accidents from the internal administration of large doses. The conclusions embodied in the report of MM. Panas and Magitot were adopted by the Academy.—*Brit. Medical Journal.*

INHALATIONS IN THE TREATMENT OF PHTHISIS.

The *Lancet* for May 23d says: "The history of inhalations in the treatment of phthisis is not an encouraging one. They have been widely employed and hailed as the most rational and effective mode of assailing the disease at its seat. But the results of this method of medication have not been commensurate with the expectations excited by it, and we imagine that of late it has been gradually falling into disfavor and disuse. Several potent objections have been urged against the method. First, it has been denied that the various antiseptic and germicide agents applied by inhalation succeed even in reaching the seat of the disease—viz., the submucus tissue of the bronchial mucus membrane—but are arrested often in the pharynx, oftener still in the larynx. Then it has been shown that, even assuming that the medicated atmosphere produced by one of the ordinary inhalers really reaches the seat of the disease, its impregnation with carbolic acid, creasote, thymol, or other such agent, is so exceedingly feeble as to leave no

solid ground for anticipating serious benefit from its use. Further, many authorities urge with much force that if the phthisical patient be taught to rely upon inhalations the inevitable result will be a life of indoor invalidism and constant tinkering with his inhalers—a mode of existence sure to effect an amount of mischief more than sufficient to counterbalance the problematical advantages of inhalation.

"There is much weight in the above objections, and until they can be satisfactorily met, the place of inhalations in the therapeutics of phthisis can not be an important one. Professor Germain-Sée, in a recent paper presented to the French Academy of Medicine, has sought to overcome the first of the objections to which we have made allusion—viz., the failure of the medicated atmosphere to reach the actual seat of the disease. He recalls the researches made at various times into the action of creosote upon tuberculosis. This drug has had a remarkable and somewhat checkered career. Discovered in 1832 by Reichenbach, its true composition was first made known in 1853 by Gorup-Besanez, who showed that it consisted mainly of two substances—gaïacol and créosol. It was in 1877 that Bouchard and Gimbert conceived the idea of its possible utility in phthisis, and made trial of it both *per primam viam* and hypodermically. Later, Fraenzel and Sommerbrodt in Germany made extensive trial of creasote, and reported benefit from its use. Guttmann, in his researches in the year 1889, found that the saturation of the system with creasote arrested the development of the bacilli, and suggested that the best means of bringing the system thoroughly under the influence of the drug would be to submit the patient to an atmosphere saturated with creasote under pressure. This is also the method recommended by Professor Germain-Sée. He describes it as follows: "The patient is shut up in a metal chamber, hermetically closed, and compressed air, passed through creasote and eucalyptol, is made to enter slowly. The air in passing through these liquids is saturated, and arrives charged with a large quantity of these medicaments. The pressure must be slowly increased, and should not exceed a half-atmosphere. The speed of delivery of the air saturated with the medicated vapors is from fifteen to twenty cubic metres per hour for a space of five cubic metres of capacity. The length of time the patient remains in the chamber is usually two hours, sometimes three or more, and no inconvenience ensues as the result of this proceedure. The inhalations are made daily or more frequently.

"Professor Germain-Sée has tried this method in twelve cases, of which one was a case of apical bronchitis, a second was a case of fœtid bronchitis, and the remaining ten were genuine cases of tubercular phthisis—all of which, with one exception, had arrived at the stage of softening. The results obtained would appear to be surprising, a marked amelioration being in most cases observable, not only in the amount and character of the expectoration, but in the general constitutional condition, and in some cases, though not in all, a corresponding improvement in the physical signs. Contrary to what might seem probable, hæmoptysis was not only not excited, but seemed controlled by this mode of treatment, and the appetite and digestion were improved rather than otherwise. Hectic fever was also diminished. Naturally, the least improvement was manifested in the physical signs, but Professor Germain-Sée is inclined to hope that by this new method the disease, if not cured, may be at least arrested, and further progress prevented. Benefit was obtained in some cases in a fortnight, in others the treatment was kept up for three months. Very great benefit was obtained in some cases of scrofulous enlargement of the cervical glands.

"At the present time it is hardly necessary to emphasize the necessity for extreme caution in admitting the claims of any new alleged remedy for tuberculosis, and the evidence before us in the present case, although interesting, falls immeasurably short of demonstration. Further trials will no doubt be made, and the results will be awaited with attention. One benefit, somewhat negative in character, may even now be derived from Professor Germain-Sée's researches—viz., the realization of the utter futility of the methods of inhalation so long adopted, and the uselessness of the inhalers now commonly employed. If inhalation is ever to become a valuable agent in therapeutics, it will probably be by the adoption of some plan analogous to that sketched above, and, according to our present knowledge, the most hopeful medicament with which to experiment would seem to be creasote."

SOLUBILITY OF NEW MEDICINES.

The following table of solubilities of some new medicines may be useful to some of our readers:

One Part of	is soluble in Water.	Alcohol.	Ether.
Antifebrin	200	10	10
Antipyrin	1	1	50
Antithermin	Slightly sol.	Slightly sol.	Slightly sol.
Cocaine hydro.	5	10	—
Iodol	5,000	3	1
Paraldehyd	10	—	—
Pyridine	1	1	—
Quinoline tart.	80	150	—
Resorcin	1	1	—
Salol	—	5	5
Thallin (sul.)	7	100	—
Thallin tart.	10	—	—
Urethane	1	0.6	—

—*Phar. Record.*

TRIGEMINAL NEURALGIA AND IODIDE OF POTASSIUM.

In the last number of the *Neurologisches Centralblatt* reference is made to some interesting facts related by Dr. S. Ehrmann as to the occurrence of severe facial neuralgia after the administration of even small doses of iodide of potassium. In the first case mentioned the patient, a strong working man of thirty-five, suffered most intense pain in the forehead and in the teeth, with sensitiveness over the whole distribution of the fifth nerve, after taking fifteen grains of the drug. A second patient after taking thirty grains had much pain in the region of the upper jaw, with pain and tenderness in separate branches of the nerve, and also œdema of the eyelids on the left side. A third and a fourth patient also suffered from similar symptoms after similar doses. There were associated in all the cases with much lacrymation and injection of the conjunctiva, but the symptoms rapidly vanished, and did not reappear on a further administration of the drug. The cases are not only interesting, but important, for it is desirable to know as much as possible regarding any peculiar effects likely to be produced by a drug which is so frequently administered as an iodide of potassium.—*Lancet.*

URETHRAN IN TETANUS.

Dr. G. Maresti (*Raccoglitore Medico*, Sept. 30, 1890) was called to see a case in which he made the diagnosis of rheumatic tetanus. The temperature was slightly above the normal; the pulse 120. Darkness, complete rest, chloral and subcutaneous injections of carbolic acid were without effect. It was finally ascertained that about fifteen days before, the patient had injured the big toe of his right foot, the skin being torn off in a spot. The diagnosis was changed to traumatic tetanus; local treatment was instituted (curetting of the lesion on the big toe, and a solution of phenic acid (30), and corrosive sublimate (3) in water (1000) was applied topically). Chloral was given three times a day, the daily amount being six grammes. The chloral was given for twenty days. Complete resolution of the opisthotonus was thus obtained, yet there remained a slight degree of trismus, with some rigidity of the pectoral and abdominal muscles. The writer then substituted urethran for chloral, its use being suggested by Prof. Coza, who remarked its manifest antagonism to the convulsions produced by strychnine, and hence recommended it in the treatment of tetanus and convulsions. The remedy was first given in the dose of two grammes a day, and finally carried up to three grammes, with total disappearance of the tetanic symptoms.

The writer claims this to be the first case of tetanus in which urethran was used.—*Jour. Nerv. Ment. Dis.*

HYPNOTIC ACTION OF ATROPINE AND DUBOISINE.

Dr. Ostermayer, of Buda Pesth, draws the following conclusions from a number of experiments made on the action of atropine and duboisine: 1. Atropine in doses of $\frac{1}{64}$ to $\frac{1}{32}$ of a grain is an undoubted sedative in maniacal cases and is indirectly a hypnotic in so far as the reduced reflex irritability which follows its administration tends to favor sleep. 2. It is not to be compared with the safe and prompt action of hyocine in this respect, although the amount of depression which follows its use in medium doses is much less likewise than that which is caused by hyocine. 3. From repeated employment the organism becomes habituated to its use and the effects become accordingly less, or even may be entirely absent. 4. Unfavorable complications, with the exception of vomiting and diarrhœa in one case, are never observed. 5. Atropine frequently has, in the author's hands, succeeded in producing a sedative effect where hyocine and morphine had proved entirely inert.

From the above it would appear that atropine in certain cases may perhaps possess some sedative properties, yet there is so much to be said on the opposite side of the question that it is doubtful whether its use will ever become general. As regards duboisine, the author concludes that, in excitable conditions and various mental affections, duboisine is comparable to hyocine, and is free

from any of the objections which may be urged against the use of the latter. 1. sedative action of duboisine may be observed within ten or fifteen minutes after the injection. 2. Duboisine's prominent action is a sedative one, and sleep ordinarily follows within twenty to thirty minutes after its administration. 3. In states of extreme excitement $\frac{1}{32}$ grain to $\frac{1}{24}$ grain are required in simple insomnia, and $\frac{1}{48}$ or $\frac{1}{40}$ grain will usually suffice. 4. Symptoms of poisoning or unfavorable effects were never noticed. 5. The action of this remedy becomes weaker under prolonged use. The remedy was used by the author in 1 per mille solution.

The author likewise claims that the system becomes habituated to the use of hyocine as is the case with atropine and duboisine. In fact, he seems to regard duboisine as quite as useful a remedy as hyocine, as regards its activity, and preferable to it on account of its greater cheapness.—*Therapeutic Gazette.*

MUSIC IN THE TREATMENT OF NERVOUS DISEASES.

Among the accessories of directly medicinal treatment, and side by side with such health-promoting agencies as rest, exercise, and change of surroundings, a definite place is due by right of its character and history to music. It is true that in later, as well as in earlier times, the sister art has been associated rather more with what is mythic and visionary in medicine than with its accredited or scientific practice. Miracle workers, mystics, and charlatans have in all ages made much of its influence on the minds of the impressible, whether truly suffering or not. There can be no doubt also that they have, as a class, been indebted in no small degree to their appreciation of this and the like natural aids for an apparent mastery of physical effects too commonly imputed to other personal and mysterious gifts of healing. In this respect they may teach us a lesson. The possession of a refined musical taste or a so-called "ear" may be denied to many persons. Some conception of harmony is probably almost universal. This understanding differs, as it must, with different minds and moods, but it exists in some degree and form, we should say, in every human being. Each temperament knows and could show, if intelligence and language were adequate, the terms of its own simplest musical coefficient, and perhaps even some of its remembered variations. The cheerful rhythm that lightened for him an hour of gloom, the flowing cadence that absorbed his petulent irritation, are as the kindred spirits of a man's family. What wonder, then, if music be found equal to the treatment of some of his diseases—those, namely, which concern his mental and nervous condition. In connection with this subject Dr. G. H. Lilley sends us a short and interesting paper on the Therapeutics of Music in Mental Diseases. He discusses with considerable force the effect of this ancient remedy on those disorders of nutrition which explain so many departures from the normal health of mind and body. A brief and lucid argument illustrates the close resemblance in physiological action between music and other stimuli which regulate the vaso-motor activity employed in tissue nutrition. Some general observations on the mode of applying the treatment suggested are likewise worth reading, and the paper as a whole forms a useful and practical, if somewhat irregular, contribution to the hygiene of the nervous system. —*Lancet.*

ADVANTAGES OF PHENACETIN OVER OTHER ANTIPYRETICS.

Dr. M. B. Herman, in the *Memphis Med. Monthly*, says, that in phenacetin we have a reliable and valuable antipyretic and analgesic, possessing advantages over antipyrin and acetanilid in that it is

1. Less toxic.
2. It seldom if ever produces cyanosis, collapse or rigor.
3. It does not produce nausea or vomiting —nor the scarlatinaform rash of antipyrin.
4. It is tasteless.
5. The administration is unaccompanied by unpleasant after effects.
6. It requires two-thirds less than antipyrin to obtain the same effect.
7. It is cheaper, being unprotected by patent.

MEDICINE.

SUBCUTANEOUS EMPHYSEMA FOLLOWING BRONCHO-PNEUMONIA.

Professor Damsch, of Göttingham, contributes a paper to the *Deutsche medicinische Wochenschrift*, No. 18, 1891, on the subject of subcutaneous emphysema, and gives details of a case in which the condition was set up in the course of broncho-pneumonia. He points out that its occurrence in association with disease of internal organs is extremely rare. It is generally produced during some act of respiratory effort, such as

straining, prolonged crying, violent vomiting, etc., but is commonly found to be limited within the alveolar or subpleural tissue of the lung itself—the so-called interlobular emphysema. This condition is not always productive of diagnostic signs, unless it spreads to the mediastinal tissues. Children are on all hands admitted to be more liable to rupture of the pulmonary alveoli than adults, but almost all writers agree that simple whooping-cough, unless accompanied by tuberculous or inflammatory disease, is hardly ever productive of subcutaneous emphysema. The latter has been produced by phthisis, especially where tuberculous ulcers are present in trachea or bronchi, and by other forms of disease tending to weaken the bronchial walls. The air, as a rule, passes from the mediastrinum to the surface along the course of the great vessels. A case is recorded in which a gradually progressive condition of subcutaneous emphysema affecting the left half of the head, face, and body, showed itself in an infant aged 15 months in the course of broncho-puenmonia of both bases. The emphysema attained a degree described as "monstrous," but the child did not appear to suffer from it, becoming quietly somnolent until its death. On examination, it was found that extensive interstitial emphysema was present over the upper lobes of both lungs, forming several rows of tiny subpleural bubbles, some of them as large as a bean. The rest of the lungs, except where consolidated by the broncho-pneumonia, were somewhat dry and anæmic. The tissues of the mediastinum were emphysematous, but the pericardium was free, and the air was found to have reached the surface by the usual route.—*Brit. Med. Jour.*

MORBID ANATOMY OF PARALYSIS AGITANS.

Dr. von Sass (*St. Petersburg, Med. Woch.*, Nos. 19 and 20) furnishes a contribution to the *morbid anatomy of paralysis agitans*. He prefaces the history of his case with a review of what has been observed post mortem by Parkinson, Scoffela, Hall, Cohn, Lebert, Skoda, Virchow, Ordenstern, Leyden, Bourillon, Rosenthal, Joffroy, Charcot, Luys and others. As is well known, these eminent observers have furnished reports of lesions most diverse in character and point of localisation, many of the changes noted being either purely accidental, or else the result of those senile degenerative processes, that occur so frequently, without producing any of the characteristic tremors. The fact that this disease is essentially confined to the most advanced periods of life, when the retrograde changes of nutrition are everywhere more or less manifest, renders it difficult to isolate the characteristic lesion. Sclerotic changes, affecting now the white matter, again the grey matter of the cord, pons or basal ganglia, diffuse or circumscribed as the case may be, seem to be the most common pathological changes. The author makes no claim that he has solved the vexed question, and frankly confesses his own disappointment at the unsatisfactory result of the careful investigation. Nevertheless, considerable credit should be his due for the very full and interesting report he has furnished, both of the clinical history and the microscopical investigation of the nervous system. None but those who have followed similar studies can properly estimate the amount of time and labor involved in a histological review of the cerebro-spinal axis, peripheral nerves and muscle fibres; each case thus studied deserves to go on record.

The patient, a woman, aged seventy-one, had complained of muscular tremor for twenty years. The history and symptoms were characteristic, and the only remarkable feature was the increase of the tremor during voluntary movements; this, as Charcot has shown, sometimes occurs in the last stages. Aside from partial obliteration of the cerebro-spinal canal, abundance of the corpora amylacea at all levels of the cord, and some arterio-sclerosis, there was nothing abnormal in the cord; however, the peripheral nerves and muscles showed decided alterations. In the brachial plexus there were seen thickening of peri and endoneurium, a diffused proliferation of connective tissue with increase of nuclei, atrophy and partial appearance of nerve fibres, with coagulation of myelin, and thickening of the blood vessels. In the muscles the fibres had everywhere undergone some atrophy, so that they appeared smaller than normal, and the sheaths were crowded with nuclei—evidently a chronic myositis.

The author calls attention to the fact that, with the exception of Leyden and Skoda, no observer had made any effort to examine either the peripheral nerves or voluntary muscles; and, while not inclined to make all the symptoms dependent on these changes, he thinks they may be largely responsible for the clinical picture; and he would explain the neuralgic pains, that frequently precede the occurrence of tremors, as due to an actual neuritis.—*Cinn. Lan. and Clin.*

VARIETIES OF URTICARIA.

Dr. Beatty (*Brit. Jour. of Derm.*, May, 1891) describes a case in which a lady, aged 23, after suffering from urticaria, had a second eruption consisting of extremely irritable papules, from 2 to 6 millimetres in diameter. The papules after a few days became flattened first at the periphery, and then at the centre; brown pigmentation took place at the periphery, and the centre became pale. The papules did not develop as wheals, but were independent of them. They remained itchy for a long time, and, some of the old pigmentary spots, having for a time ceased to be irritable, became irritable again. A few elongated patches formed, with a pigmented periphery and white elongated centre. The papules continued to appear after the wheals had ceased to form. Dr. Beatty associates the case with two cases previously published by him in the *Trans. Acad. Med. in Ireland*, vol. ii, p. 37, 1884, and considers that urticaria associated with pigmentation may be divided into three groups—namely, urticaria pigmentosa; ordinary urticaria, or urticaria papulosa of children, followed by temporary brown pigmentation; and urticaria, in the course of which occur, sometimes quite independently of the wheals, extremely itchy papules, which on subsiding leave either pigmentation only, or more commonly a zone of brown pigmentation, with a white pigmentless centre. These papules continue to come out after the wheals have ceased to appear. The pigment may eventually disappear, and white pigmentless spots remain. The disease may occur after childhood.—*Brit. Med. Jour.*

NORMAL ALBUMINURIA.

Few, if any, insurance companies will accept a risk, if albumin has been demonstrated to exist in the applicant's urine, and while the examining surgeon may personally be convinced of the trifling nature of the cause which has produced the trace discovered, the company considers it inexpedient to discriminate, and hence places all such cases in the same class as undesirable.

Undoubtedly albumin can be found in many instances where nephritis does not exist and where it does not subsequently develop, and much injury and injustice is done to those who are unfortunate in one sense and fortunate in another, as the victims of temporary, cyclic, regularly or irregularly intermittent, or any other form of benign albuminuria. These individuals are the victims of a science which goes far enough to discern the signal, but is not in every instance able to make out whether it is really a signal of danger. So important is this question of the forms of albuminuria which are not of necessity dangerous to life, that everything bearing upon it should receive careful consideration.

Senator ascertained to his own satisfaction that there was a "physiological albuminuria" some nine years ago, and believed that the source of the albumin is the epithelia of the urinary passages, and of the tubules of the kidney which undergo periodical desquamation.

The difficulty of demonstrating the slight amount of albumin present in health, lies in the fact of its high state of dilution. Posner has proposed a method of detecting the presence of small quantities of albumin, which is a modification of the process advanced by him in 1886, and which consisted in the free addition of acetic acid to the urine, which converted the albumin into a non-coagulable acid-albumin. After evaporation and filtration the albumin is made apparent by the ferro-cyanide of potassium.

This he has modified as follows: Precipitate with alcohol, wash the precipitate with hot alcohol, then with cold ether, and throw upon the filter boiling concentrated hydrochloric acid. If albumin is present on the filter a beautiful violet color is obtained.

Pavy has given an excellent description of the transitory albuminuria tending to recur in a cyclical manner, and many have since added their observations on this interesting phenomenon.

It is now quite generally accepted that the condition may arise from dietetic causes as well as from muscular exercise, and some observers, among them Falkenheim, have found it in certain individuals always following rest in bed. In one case lying upon the left side produced a marked increase in the albumin, due it was thought, to compression of the renal veins by a large spleen.

Dr. Lewis, of Hartford, has found that although from six to ten per cent. of persons who apply for life insurance have more or less albumin in their urine, still the mortality rate "both of selected lives and the general public" rarely exceeds 3 per cent., from which he infers that only about 30 or 40 per cent. of albuminuria cases terminate fatally. While it is well to bear in mind the possibility of albuminuria without nephritis, we must not fall into a habit of regarding the presence of albumen as trivial and thus overlook the really serious cases.—*Med. Record.*

TRAUMATIC NEUROSAL PEMPHIGUS.

R. F., aged 17, a well-nourished bright-looking girl, had suffered from fits of an epileptic nature, brought on by a fright at school, from childhood. In December, 1887, while cutting wood, she chopped off the distal phalanges of the index and ring fingers, and cut through the middle phalanx of the middle finger. She was taken into the Cottage Hospital at Sevenoaks, which she left in a month with the wounds unhealed; they remained open for three months. Shortly afterwards patches of redness followed by blebs appeared on the left wrist, hand, and arm. The eruption was peculiar from the rapid way in which it spread; sometimes in a quarter of an hour the whole hand and arm would be covered with large blebs, which would burst and give out a thin sticky watery discharge, which on drying would leave the surface of the skin of a purple or bluish tint. The circulation also seemed very feeble.

In February, 1889, she had a crop of these on the left leg. Up to that time she was rarely without a series of blebs or threatening of them for quite twelve months. Various remedies, principally arsenic and iron, with external applications, were tried without effect. I admitted her into the Norwood Cottage Hospital, and having found the puckered cicatrices of the ring and middle fingers, especially the latter, very tender, I amputated the stump just beyond the proximal joint of the middle phalanx.

In March, 1889, she had a much slighter return of vesicles, and in August of the same year, a single vesicle, after being at the seaside, since which she has had no return. At this time a small fragment of bone worked out of the dorsal surface of the wrist.

The vesicles in this case occurred in irregular patches upon both the front and dorsum of the forearm, in the area of distribution of both the median and the ulnar nerves. That the irritation was reflex is rendered probable by this scattering of its effects and the occurrence of the disease on the leg of the same side, as well as its cessation after removal of a source of irritation upon the median nerve alone.

A microscopic preparation of the scar on the amputated portion, kindly made by Mr. H. G. Plimmer, shows hypertrophied papillæ with new small cell inflammatory growth round vessels and nerves extending in all directions.

June 8th. Since the above was sent for publication, a slight return of vesicles has occurred and may probably require an operation upon the other finger. She has been quite free for eighteen months.—Dr. John H. Galton, in the *Brit. Med. Jour.*

ON SOME POINTS IN THE PATHOGENESIS OF AURAL VERTIGO.

Dr. Oren D. Pomeroy communicates through the *New York Medical Journal* a paper which is not intended to enter into all the causes of vertigo, but only those associated with diseases of the ear, and these are drawn principally from the experiences of the writer. It is probably safe to say that vertigo depends on cerebral and spinal disturbances; on some fault with the eyes, including any or all of its muscles, or the condition of the optic nerve; on ear affections; on stomach disorders; or any other source of peripheral irritation which acts on the co-ordinating center. The twenty-four cases illustrating this subject are taken from his private note-book.

The cases may be summarized thus: Vertigo was the result of eye or ear trouble or brain tumor in 1 case; of suppuration of middle ear in 1 case; of labyrinthine disease from traumatism in 3 cases; from sunken membrane in acute middle-ear catarrh in 1 case; from labyrinthine disease or sclerosis of middle ear in 1 case; from acute suppuration, and possibly labyrinthine disease in 1 case; from Ménière's disease in 2 cases; from suppuration and polypi in 3 cases; from sunken membrane in chronic aural catarrh in 5 cases; from labyrinthine disease, secondary to middle-ear disease in 1 case; from sunstroke or labyrinthine disease in 1 case; from sclerosis in advanced middle-ear disease in 1 case; from syphilis, epilepsy, or middle-ear disease in 1 case.

It would seem by the above summary that a more exact statement might have been made as to the specific causation of the vertigo, but the writer used what acumen he was possessed of in estimating causations.

In the review of cases, only one is recorded as vertigo from advanced sclerosing processes of chronic middle-ear disease. This might be misleading, for Dr. Pomeroy is sure he has met with a considerable number of cases of vertigo in profound middle-ear deafness with no tubal obstruction. In such cases ankylosis of the ossicula, adhesive bands within the tympanum causing fixation of the stapes in the oval window, secondary contractions of the tensor and stapedius muscles, thickening and rigidity of the membrane of the round window, exhibit sufficient causes

for producing pressure upon the perilymph and consequent vertigo. Of late, operative procedures have been instituted for the relief of this condition—such as division of the tensor tympani, of the stapedius, perforation of the membrane, division of the posterior fold, etc,—but with little effect. More recently still, the membrane itself, with one or more of the ossicles, has been removed with the hope of relieving sources of pressure, or obstruction to the passage of audible tones, but with uncertain results. The general opinion of the American Otological Society at its meeting in 1890 seemed opposed to this procedure, although it was confronted by a single case of Dr. Burnett's, of Philadelphia, where removal of the drum membrane and malleus had completely relieved a patient of tinnitus and vertigo. Dr. Pomeroy conceives that such operations may be justifiable, though he should incline to reject all cases where bone conduction was weakened.

Vertigo may be observed in any form of *labyrinthine disease*, but Dr. Pomeroy believes, always in Méniere's disease.

Labyrinthine disease from traumatism very often exhibits vertiginous symptoms, as my cases show. In hyperæmia of the labyrinth from the effect of drugs, notably of quinine, there is very likely to be vertigo, although, where quinine is administered, there may be a middle-ear causation as well. In disease of the labyrinth which is secondary to middle ear disease we often observe vertigo. It is difficult to state precisely the mode in which disease of the labyrinth causes vertigo, but, in a general way, we may conclude that pressure has very much to do with it—pressure from hyperæmia or inflammatory products. Disorganization of the labyrinth would naturally disturb the function of co-ordination. The integrity of the semicircular canals would be affected by almost any form of labyrinthine disease, and we may give these canals whatever credit they may have in presiding over co-ordination. Vertigo from any form of organic labyrinthine disease is not to a great extent amenable to treatment. Absorbent remedies, like mercury and iodide of potassium, promise the best results, perhaps, of any.

In middle-ear disease the vertigo undoubtedly depends on pressure. In great hyperæmia of the tympanum, pressure on the labyrinth waters may easily be effected through the round or the oval windows. Collections in the drum cavities, the product of inflammation, may produce a similar result. Pressure on any part of the perilymph may disturb all the functions of the labyrinth.

The sunken drum membrane causes direct pressure on the vestibule, through the stapes, it being driven inward at its fixation in the oval window. The cases here reported show a direct relation between the obstructed tube and the vertigo. Treatment relieved the patient; but, on a relapse of catarrhal symptoms with obstruction of the Eustachian tubes, the vertigo returned.

Another cause of vertigo mentioned by Dr. Burnett, of Philadelphia—to wit, spasmodic contraction of the tensor and stapedius muscles, causing temporary hardness of hearing and vertigo—Dr. Pomeroy has no experience of, though he readily sees the possibility of such a phenomenon: pressure on the perilymph from indrawn membrane.

The cases also show great frequency of vertigo in aural polypi. In these instances it needs no demonstration to show that pressure is the cause of the trouble. In malignant tumors of the tympanum there is vertigo, with, perhaps, greater frequency than in ordinary polypi. Dr. Pomeroy has no record, but, to the best of his recollection, almost all of his cases of malignant disease of the tympanum have been accompained by vertigo. In these instances the tumor is likely to grow more rapidly, attain to a greater size, and consequently cause more pressure than in aural polypi. Other causes of aural vertigo may, perhaps, be mentioned here. Syringing the ear often causes giddiness, undoubtedly from violence inflicted on the labyrinthine fluids. Dr. Pomeroy once heard of a patient who fell to the floor from an attack of vertigo while administering a nasal douche, some of the fluid having entered the tympanum. Violent inflation of the drum cavity will sometimes induce a temporary vertigo.

In reviewing the work of neurologists, it is apparent enough that diseases of the internal ear figure principally as pathogenetic factors in vertigo. This Dr. Pomeroy believes to be a conspicuous error, as in his experience a much larger number of cases of middle-ear disease are concerned in the causation of vertigo than are those of the labyrinth.

Dr. Pomeroy was led to develop this subject as in the present article, from the fact that vertigo has often been regarded as evidence of brain or spinal disease, when an investigation of the auditory apparatus might have placed the difficulty elsewhere.

SURGERY.

THE OPERATION FOR INTUBATION OF THE LARYNX WITH REPORT OF TWENTY-TWO CASES.

Dr. Hal Foster in the *Kansas Medical Journal*, reaches the following conclusions as a result of a careful study:

Intubation of itself, performed with care, involves little if any danger to life. Accidents during the operation generally result from want of care.

It prevents asphyxia, and thus gives more time for the administration of remedies, and for the system ultimately to throw off the disease. It prevents laborious and rapid breathing and lessens exhaustion. It allows a free supply of air, and thus assists in the cure of the original malady. It is the supreme resource, and as the patient cannot be made worse by it, do not postpone it until there is but a forlorn hope even from it.

Persistence of the original disease, delay in the performance of the operation, and neglect afterwards are the causes of its failure. Operate early, very slowly, deliberately, carefully and without hurry. It is never too late to operate even though the child has stopped breathing, if life is not extinct, insert the tubes and perform artificial respiration. I have saved several children under just such conditions. If strangulation is the main symptom neither age, constitutional condition nor complications can furnish a contra-indication to its performance. It alleviates suffering; it mitigates all the symptoms; it obviates secondary complications; it never adds one element of danger to the original disease.

Statistics taken collectively show that nine-tenths of the cases which render the operation needful will suffocate without it. Performed early it snatches from certain death fully two-fifths of all the cases. No patient that dies after the operation would have lived if it had not been performed. When it fails to save life the relief afforded and the substitution for the most agonizing mode of death, strangulation, for one of the least, by asthenia, are sufficient to justify its performance.

OPERATION FOR OPENING THE POSTERIOR MEDIASTINUM.

In a recent communication to the *Société de Chirurgie of Paris*, Mr. Quenu described an operation he has lately devised, in association with M. Hartmann, for gaining access to the posterior mediastinum (*Revue de Chirurgie*, No. 3, 1891.) A vertical skin incision is made midway between the spinal border of the scapula and the vertebral column. After division of the exposed portions of the trapezius and rhomboid muscles, and displacement inwards of the outer border of the sacro-lumbalis, a portion of the entire thickness of each bone and about three-quarters of an inch in length is taken from the third and each of the two following ribs. An opening is thus formed nearly five inches in length, and extending from the first rib to the upper border of the sixth. Quenu states that by separating the sides of this wound one can see very clearly the whole of the posterior mediastinum and all the organs it contains. This operation, it is pointed out, is attended with more difficulty and danger on the right than on the left side, because, as was first shown by Braune, the pleura, which on the left side passes directly from behind forwards, insinuates itself on the right side between the œsophagus and the vertebral column in order to reach the aorta. Operative penetration into the posterior mediastinum might, it is thought, be indicated in disease of any organ contained in this part of the thoracic cavity, but is most likely to be needed in cases of impacted foreign body in the lower part of the œsophagus. The anatomical conditions in this operation are not favorable to removal of malignant disease of the gullet unless the growth is of very limited extent.—*Brit. Med. Jour.*

STERILITY OF PUS IN ABCESSES OF THE LIVER.

An unfortunate accident which, however, was unattended with any bad consequences, happened to a surgeon a short time ago, who was operating for the relief of a large hepatic abscess, about which there were no adhesions. The surgeon, M. Peyrot, had just withdrawn about two litres of pus from the abscess, and was proceeding to wash the cavity out when the hepatic incision disappeared from the field of operation, and it was only after much difficulty, and the expenditure of twenty minutes in manœuvring that it was again discovered. A certain quantity of pus had evidently escaped into the peritoneal cavity; nothing, however, followed this accident. No untoward symptoms occurred, and the patient made an excellent recovery. In order to explain the fact of the harmlessness of the pus, it is essential to recollect that Saveran and Neltee have shown that pus obtained from abscesses of the liver consecu-

tive to dysentery is usually sterile—*Med. Press and Cir.*

STATISTICS OF BREAST AMPUTATIONS.

Terrillon, in a recent number of the *Bulletin General de Therapeutique*, publishes a practical paper on the immediate and remote results of a hundred cases of amputation of the breast performed by himself. They are divided into forty-eight cases of carcinoma with enlarged axillary glands; thirty-one of mixed growths, mainly sarcomatous; twenty-one of adenomata or cystic growths. Out of the first series, forty-two are dead, but recurrence has taken place in all of the remaining six. Of the second series, two only are dead; one of these lived eight years, recurrence taking place in the region of the scapula, the other lived four years, recurrence showing itself in the axillary region. Of the last series all the patients are alive. Thus, out of the whole number submitted to operation, fifty-six are still living, and forty-four were only benefited in varying degrees. With regard to the forty-four carcinomatous cases the following details may be given of the periods of their survival:—One patient lived seven years; two survived five years; four four years; five three years; eleven two years; twelve one year and a half; and lastly, eight less than one year. He remarks that recurrence seems to be the rule when, after removing the breast, it is found at the same time necessary to extirpate some of the axillary glands. The recurrence, moreover, most commonly takes place in the first years, that is, there is seldom survival beyond the seventh or eighth year. The paper includes various remarks about complications arising from the operation and the after treatment.—*Med. Press.*

PERMANENT ANTISEPTIC IRRIGATION.

Dr. E. von Meyer recommends this method of treating septic wounds, which he has successfully practised in Czerny's clinic during the last two years. It consists in placing the affected part in the metal tub, and keeping up constant irrigation by means of an irrigator provided with a spiral coil of perforated metallic tubing which acts as a "sprinkler." The limb is lightly covered with gauze, and suspended in the tub by broad bandages attached to hooks at the sides. The bottom of the tub is sloping so that the fluid can flow off readily through an opening connecting with a tube, which terminates in a vessel placed under the bed. The cases in which this method has been employed comprise:

1. Cases of general sepsis arising from subfascial phlegmons and septic conditions after fractures.

(*a*) Cases of progressive gangrenous phlegmons, of spontaneous origin or developed after compound fractures.

(*b*) Septic amputation stumps after intermediate amputations and resections.

2. Extensive lacerated and contused wounds, with marked gangrene and sepsis of the soft parts.

On the ground of the results obtained in these cases, the author presents the following indications for the employment of permanent antiseptic irrigation:

1. In all cases of fractures and luxations attended with suppuration, especially when the surrounding parts are phlegmonous, and distinct signs of commencing sepsis are present.

2. In all cases of deeply seated progressive phlegmons in which gangrene is likely to occur.

3. In all cases mentioned above in which resection or amputation has to be performed, owing to pronounced general septic infection, or for the treatment of septic amputation stumps.

4. In severe contused wounds in which a conservative method of treatment is selected, as soon as the integrity of the soft parts is threatened by gangrene, and the danger of a general septic intoxication is present.

For irrigation a number of antiseptic fluids have been proposed, but the best, in the author's opinion, is a 1 per cent. solution of aluminium acetate. In cases of septic and phlegmonous wounds the author also makes a liberal use of iodoform, to which he assigns an important part in the disinfection of septic wounds. The gauze layer should be changed twice every day, the wound carefully inspected, and all gangrenous fragments of tissue removed, so that the antiseptic solution comes in contact with a clean surface, washes away all pus, and penetrates the tissues. The drainage tubes in the wound must be carefully watched, for they become easily plugged with fragments of necrotic tissue. Unless all these details are attended to, no success can be expected from permanent irrigation; for the fluid then flows over firmly adherent necrotic portions, beneath which abundant pus stagnates. Permanent irrigation should only be discontinued when all signs of sepsis have completely disappeared, and the wound appears perfectly cleansed.—*Deut. Zeit. für Chir.*

NEPHROLITHOTOMY IN A BOY, AGE 10.

Mr. Bilton Pollard reported a case of a boy who during the past three years had been subject to attacks of abdominal pain associated with hæmaturia. The attacks of pain were not characteristic of renal calculus. The hæmaturia was sometimes profuse. The urine contained no pus, and when free from blood it appeared to be healthy. The right kidney could be felt, it was not tender on pressure and there was no renal tumor. The boy's general condition was good, although he was anæmic. On December 25th, the right kidney was explored through the lumbar incision at the North Eastern Hospital for Children. The stone could be felt in the pelvis of the kidney by the finger, and was also struck by the exploring needle. It was easily extracted through the cortex of the kidney. The stone weighed twenty-seven grains. The kidney bled rather freely, but the bleeding was stopped easily by plugging the wound in the kidney with gauze. The gauze was removed on the following day, and the tube on the second day after operation. No blood appeared in the urine after the operation, and as the discharge of urine from the wound did not diminish materially, the renal pelvis was again explored on the fourteenth day after the operation, as it was thought possible that it might be plugged with blood clot. No clot was found. A fine tube was passed in the direction of the ureter and some lotion syringed through it with the object of dislodging a clot if there was one impacted in the ureter. The quantity of urine which escaped from the wound now diminished quickly and ceased entirely after the fifth day, and the patient made a complete recovery. It was now sixteen weeks after the operation and the patient continued well. From inquiries which Mr. Pollard had made he thought nephrolithotomy was a rare operation in childhood. Mr. R. W. Parker had twice operated for renal calculus in children at the East London Hospital, but no cases of the kind had occurred in three other London children's hospitals, nor yet at the Pendlebury Children's Hospital. Mr. Pollard reported the case with the view of ascertaining the experience of others in regard to renal calculus in childhood.—*Med. Press.*

ABDOMINAL SECTION FOR ACUTE INTESTINAL OBSTRUCTION.

Jordan Lloyd (*London Lancet*) after giving the details of eight cases reaches the following conclusions:

1. In acute intestinal obstruction our attention should be primarily directed to the strangulation of the walls of the bowel rather than to the fæcal current. When strangulation exists immediate operation is demanded.

2. The ordinary text-book distinctions between obstruction in the large and small bowels are not always to be depended upon.

3. In all obstructions above the rectum calling for operation, median abdominal incision is the proper primary procedure.

4. When the abdomen is open the examination of its contents should be systematic and expeditious, the hand being introduced into the peritoneal cavity, if necessary, and if the obstruction is not quickly discovered, the most distended coil should be fixed to the skin and opened at once. If the large intestine is the part involved, the cæcum or sigmoid should be brought through a special opening made in either groin.

5. With proper precaution a few feet of bowel may be withdrawn from the peritoneal cavity, and returned without difficulty and without serious risk.

6. Rapidity of procedure with a minimum of disturbance are the essentials of operative procedure.

7. The number of lives saved by abdominal section will increase, as earlier and more accurate diagnosis comes to be made.

OPERATION FOR NASO-PHARYNGEAL POLYPI.

Baracz (*Centralbl. f. Chir.*, April 18, 1891) describes a method for which he claims the following advantages, namely, that it avoids much bleeding and enables the operator to get the growth completely away. The plan has, as he states, been employed previously by others, but has not met with the general acceptance which it deserves. It is principally applicable to those growths which cannot be removed by the forceps through the nostrils. Chloroform is not administered, but the part affected, together with the surface of the lips and nose, which has to be incised, is rendered insensible by means of cocaine. An incision is made through the lip just to one side of the middle line, and the incision is carried up through the fleshy part of the nose on one side of the septum as far as the nasal bones. Should the growth be very large the nasal bone may be cut and turned aside, along with the flap of skin, to the corresponding side of the face. This flap is grasped by an assistant, and the nasal aperture enlarged slightly by bone forceps if

necessary, though it is very rarely needful to do so. One finger can then be introduced into the nostril and another behind the soft palate, and the polypi enucleated with the finger nail. In children an anæsthetic must be employed. Baracz states that the whole nasal cavity, so far as the base of the skull, can thus be got at. If the cavity is well irrigated out afterwards the bleeding is not great. The edges of the wound are then accurately adjusted, and only a linear scar remains. Baracz claims that by this comparatively simple incison quite as much can be effected as by the larger-planned operations of Langenbeck and others.—*Brit. Med. Jour.*

OPERATIONS FOR PROMINENT EARS.

Monks (*Boston Med. and Surg. Jour.*, Jan. 22, 1891) discusses the treatment of this deformity. In his first case an attempt was made to reduce the prominence of the ears by keeping them pressed close to the side of the head by means of a spring passing over the top. This contrivance was faithfully tried for several months, but no great improvement could be seen. In the second case a vertical strip of skin and cartilage was taken from behind. The anterior surface was left intact. This operation was successful, although the cartilage took a long while to heal, and a vertical fold of skin was formed on the front aspect of the ear where the cartilage had been brought together. In three other cases an elliptical piece of skin was removed. The result was satisfactory. A girl of 5 years was similarly treated, and the result was satisfactory.

Operations by excision of skin and cartilage are only called for when the cartilage is stiff. It seems almost impossible to perform an operation on the cartilage which will leave no trace of undue prominence, scar or depression. The method by excision of the skin alone is applicable to cases where the cartilage is not stiff. The shape of the ellipse varies somewhat with the case, the strip being widest where the prominence is most marked. In all cases the inner incision should be close to the bottom of the culcus. As the cartilage tends to regain its old position after the operation, a broad piece of the skin should be resected; that is, a piece equal to more than half the breadth of the back of the ear. The sutures may be removed from the third to the sixth day. A bandage is to be worn for ten days or two weeks, and for several months a night cap should be used.—*Univ. Med. Mag.*

GYNÆCOLOGY.

GYNÆCOLOGY IN THE JOHNS HOPKINS HOSPITAL, BALTIMORE.

During a recent trip to Baltimore, Dr. J. E. Graham and I enjoyed the hospitality of our old friend, Professor Wm. Osler, and were also entertained by others of the leading medical men of Baltimore, whose cordial manner cannot help but foster warm and friendly feelings. Johns Hopkins Hospital is unique and must be seen to be appreciated. Though it is situated near a densely populated part of the city, where clinical material is abundant, it is so elevated that it commands a view of the city and suburbs. The Hospital buildings are so constructed that they give the most perfect sanitary results. The grounds are spacious and well kept. Everything seems so ordered that both the convenience of the medical men and the best interests of the patients may be served. Post-graduate work is only done. The teaching is thorough, and such a scientific atmosphere pervades the place that it cannot help leaving a favorable mark upon all who are fortunate enough to be able to avail themselves of its manifold advantages.

In the Hospital my time was chiefly occupied with work in the gynæcological department, under Professor Howard A. Kelly and Dr. H. Robb.

One is particularly impressed with the great amount and thoroughness of the work. From the out-patient clinic suitable cases are chosen, and the wards are filled with many patients demanding operative measures for their relief.

The wards are well lighted, suitably ventilated, scrupulously clean, and supplied with every convenience. The appearance of the operating room is unique, with its tiled floor, clean walls, brass table with glass top, instrument cases with glass shelves, wash basins, trays, vessels of glass of different color for different solutions, sterilizers, and glass bottles for cotton, bandages, etc., and in fact every appliance for convenience and perfect cleanliness.

Professor Kelly believes that the greatest difficulty is encountered in freeing the hands from infectious germs—the most harmful of which he takes to be the streptococcus aureus. In order to be sure of avoiding the baneful effects of these germs, he goes through and causes his assistants to adopt a most rigorous course. First, they dress in white duck for the operation. The hands and arms are bared, and after scrubbing for ten minutes

with soap and hot water, they are rinsed with pure water and soaked in a saturated solution of pot. permanganate, which is again rinsed off in distilled water, and then the brown color is removed by a saturated solution of oxalic acid, which in its turn is rinsed off in tepid distilled water. The instruments are wrapped in a towel, sterilized by steam, and placed in a glass tray under distilled water ready for use.

I saw some "hand cultures." After an assistant had washed his hands and soaked them in perchloride of mercury solution, some scrapings from under the nails were placed in culture media. In due time germs were produced, some of which, when injected into a rabbit, caused death. Dr. Kelly believes that perchloride of mercury solutions retard but do not absolutely prevent the production of poisonous germs, whilst saturated solution of permanganate of potash absolutely destroys the germs. The patients are prepared with as great care as the instruments and the hands of the operator. Ether seems to be used oftener than chloroform. I saw a good many cases of vaginal hysterectomy, all doing well. One was notable, as the operation was done for prolapse of the uterus, which was of such a marked character that no other plan of treatment seemed to offer a chance of relief from her distressing symptoms. Some of the hysterectomies were done for myomata, and Dr. Kelly believes that where the life of the patient is rendered unbearable by pain or disease caused by pressure from myomata, and when other treatment is unavailing, hysterectomy is justifiable. One case of cystic ovary was operated upon by Dr. Kelly in which the adhesions were so dense and general and the bleeding was so free that the cyst could not be removed without seriously threatening the life of the patient. He broke quickly through the adhesions of the pedicle ligated it, emptied the clots out of the sack and washed it out with warm water, drained and packed with iodoform gauze, with good result. In a case of subperitoneal myoma removed by Dr. Robb the omentum was attached, and its vessels so enlarged that, instead of separating adhesions, he tied off omentum, tied the pedicle and removed the tumor, after which he tied the pedicle again by cross stitches.

There were very many other operations of great interst to me. In dilating the cervix-uteri, Professor Kelly uses the dilators with repeated quick movements, changing the position so as to dilate evenly. In repairing lacerations of cervix, he cuts the scar tissue away very freely, and uses silk-worm gut with catgut for the superficial stitches. In lacerations of the perineum he does a very neat operation, using Emmet's curved scissors, and denuding higher up on the vulva than many advise. Catgut for the lesser and silk-worm gut for the deeper stitches are used. Glass catheters are preferred, as they are so easily cleaned.—*Albert A. McDonald in the Canadian Practitioner.*

RECTAL FISTULA AFTER PYOSALPINX.

Dr. Ozenne (*Revue Obstét. et Gynécolog.*, March, 1891) recently had under treatment a patient, aged 30, suffering from chronic pelvic disease. Eight years previously salpingitis followed a forceps labor. The pus escaped into the rectum, and after three months' rest no more purulent material came away from the bowel. Six years later severe pelvic pains again set in, with symptoms of metritis and pyosalpinx. After many months of ill health the pus once more escaped into the rectum, this occurrence being followed by great temporary relief. At length the patient fell ill again. On examination a swelling could be felt in the left iliac fossa. The orifice of the fistulous tract was detected about 3½ inches above the anus. Dr. Ozenne believed that, seeing how long the pelvic disease had existed, abdominal section would entail great difficulties and dangers. He treated the patient by rest in bed and by vaginal injections of a 1 in 4,000 sublimate solution night and morning, whilst at the same time the rectum was washed out with about five quarts of a warm boracic solution, thrown up slowly so that it might be retained for some time. Every morning a boracic solution was thrown into the abscess, a double-channelled gutta-percha sound being passed into the fistula. Laxatives and tonics were given. At the end of a fortnight the patient was able to get up and lie on a sofa; the injections into the abscess were left off. For a month longer the enemata and vaginal injections were continued. The general health was completely restored, and the walls of the pelvic abscess had contracted. Eight months later the patient was still in good health, without any sign of recurrence of her pelvic troubles.—*Brit. Med. Jour.*

OBSTETRICS.

UTERINE IRRIGATION OR INTRA-UTERINE CAUTERIZATION.

Dr. Eichholz, in the *Frauenarzt*, gives statistics to prove that during epidemics of

puerperal fever the mortality was higher in cases in which intra-uterine injections were made than when they were omitted. In Gusserow's clinic, *e. g.*, the mortality was 3.8 per cent., the injections being used, and after they were omitted the mortality was reduced to 0.39 per cent. Breisky and Fehling made similar observations in 1877. E. claims that the injections are at times not only useless, but may be dangerous, for it is possible to bring infection into the uterus by introducing foreign material from the vagina. The injections have in many cases produced symptoms of poisoning. Steffek reports a case which ended fatally after the use of a corrosive-sublimate injection (1:5,000), in a woman who was delivered of a macerated fœtus in the fifth month, the symptoms of poisoning appearing one hour after the injection; the patient died on the seventh day. Maurer observed a case of poisoning due to an injection of carbolic acid. The author gives another reason to prove that the injections are dangerous, namely, the fact that the fluid enters directly into the venous system, and also that it may be carried into the system through the Fallopian tubes, as evinced by pains in the abdomen, general peritonitis, and death. Chrobak collected eighteen cases of death due to the use of intra-uterine injections of caustic fluids. He furthermore claims that we have to consider the amount of pressure used in injecting, as also the quantity. If the pressure is at all great, considerable irritation is produced; consequently there must be no pressure and the quantity must not be too great. He therefore concludes that it is better to make direct applications, and recommends the use of chloride of zinc (fifty per cent.) as practised by Rheinstädter: His method of employing the zinc is as follows: He introduces a Trelat's speculum into the vagina, carefully cleansing the external genitals and the vagina by means of cotton soaked in corrosive sublimate (1:1,000). The cervix is then drawn down and the canal dilated. Next he curettes the uterus, and then makes a uterine application by means of a brush—the thickest portion of which does not exceed five millimetres—dipped in chloride of zinc (fifty per cent.). The vagina is then cleansed again, and a cotton pad placed over the vulva and changed when soiled. The brushes are never to be used more than once. Author reports twelve cases of premature births treated in this manner with most excellent results.

He summarizes the subject as follows:

1. That uterine irrigation, used as a prophylactic measure or for therapeutic purposes, is not as valuable as is generally believed.

5. When we consider its inefficacy on the one hand, and its dangers on the other due to entrance of air and water into the vessels and tubes and the danger of poisoning, we must consider it preferable to adopt other methods.

3. This method can in the majority of cases be replaced by the application of $ZnCl_2$, as described by Rheinstädter. It is not as dangerous as is irrigation, and undoubtedly disinfects the interior of the uterus much more thoroughly.—*Exchange.*

THE PLACENTA IN ECTOPIC GESTATION.

The question of the growth of the placenta after the death of the fœtus in cases of ectopic gestation is not only interesting in itself, but may be important from a medico-legal point of view. It has long been suspected that the growth of the placenta must outlive the fœtus, for instances are common in which a large placental mass exists without the trace of an ovum, or at most with a fœtus obviously much younger in point of age. Recent observations by Mr. Tait and by Dr. Bantock have now placed this developmental survival of the placenta in occasional cases of this kind beyond a doubt. There remains, however, the interesting histological question as to how the placenta continues to grow. As has been pointed out by Dr. Barnes, the placenta is a double organ, consisting of a fœtal and of a maternal portion. *A priori* considerations would suggest that the growth must bear principally if not exclusively on the maternal portion, but microscopical information, which alone can settle the point, is wanting, though doubtless now that attention has been called to the lapsus, the requisite investigation will shortly be carried out. This fact, moreover, has a bearing on the treatment, for it would obviously be useless to kill a fœtus by electricity or other means leaving it *in situ* if the placenta is likely to continue growing, for rupture of the tube and hæmorrhage will as certainly follow as if the fœtus were present in person.—*Med. Press.*

TREATMENT OF SEVERE VOMITING OF PREGNANCY.

Dr. Amand Routh, after alluding to the difference between the vomiting *of* pregnancy

and the vomiting *in* pregnancy, noted the anxiety occasioned by severe forms of this condition, and the advantage of having an easy and efficacious mode of treatment in itself free from risk. Although it was now generally held to be reflex, and due to some local irritation at or near the os uteri internum, great difference of opinion existed as to the exact pathology and to how it was produced. The author did not think the vomiting was often secondary to displacement or incarceration, and showed that it occurred where no malposition existed, and that, even when vomiting occurred with misplacement, replacement did not cure it. The treatment by drugs, accessory measures, replacement, Copeman's dilatation, local applications of cocaine, counter-irritation, etc., was reviewed, and it was shown by several cases that painting the cervix and the end of its canal with iodine paint (equal parts of iodine, iodide of potassium, spirits of wine, and water) had, in the author's hands, never once failed in the last seven years, at once to stop the sickness, which might, however, begin to return from the fifth to the fifteenth day, when it was almost certainly permanently arrested by a second application. A prompt use of this remedy in cases threatening to become urgent would prevent the occurrence of the so-called "uncontrollable" or pernicious vomiting, which differed only in degree, and not in kind, from the milder forms. Induction of abortion would still be required when the vomiting was due to the presence *in utero* of a foreign body, such as a dead fœtus or a hydatid or fleshy mole, but might otherwise, by this proposed remedy, be avoided.

PÆDIATRICS.

A RECORD OF THE RESULTS OF FIVE HUNDRED AND TWELVE CASES OF INTUBATION OF THE LARYNX.

Bleyer has embodied in an interesting paper, which appears in the *Archives of Pædiatrics* for March, 1891, his observations made in an experience covering the above number of cases of intubation. In order to show that the operation has now attained a position which entitles it to recognition as a feasible and practical surgical procedure, he compares its results with those of tracheotomy. Of the 512 cases in which he performed intubation, thirty-seven per cent. recovered, while the most complete statistics of tracheotomy, those of Lovett, show the proportion of recoveries from that operation to be twenty-eight per cent. With regard to the details of the operation of intubation, Bleyer insists upon the necessity of a preliminary laryngoscopic examination, the performance of which will be facilitated, when the patient offers resistance, by the employment of a gag and tongue-tractor of his own device. The examination is of value, not only because it will reveal the nature of the affection for which the intubation is contemplated, but because, in cases of diphtheria or of croup, it will permit the operator to see and remove any loose membrane which might be pushed downward by the tube—a complication which the writer regards as the rule rather than the exception.

The matter of the selection of the size of the tube to be employed in a given case is one which requires some experience. It must be remembered that the size of the larynx varies considerably in different children of the same age.

Daily removal of the tube for the purpose of cleansing it from accumulated loose membranes and secretion was practised in many of the writer's later cases. He prefers that it should be accomplished by means of the two forefingers rather than the forceps. In a large number of the cases he found that the tube could be dispensed with after the second, third or fourth day. In a few cases its re-introduction was necessary.

By way of local treatment, irrigation of the nostrils with a solution of peroxide of hydrogen, one part to two of water, is recommended, a soft rubber catheter being used for the purpose. After the nares have thus been thoroughly cleansed, the pharynx and larynx are to be irrigated with a 1–8 solution of the peroxide of hydrogen, the patient's head being held forward over a basin in order to facilitate the escape of the fluid. These cleansing applications should be made every two hours. At the times of removal of the tube irrigation with a solution of bicarbonate of sodium, half an ounce to fourteen ounces of luke-warm water, is advised.

As to medicinal treatment, Bleyer speaks favorably of his experience with calomel, given in half-grain doses every hour. In the administration of food the stomach tube was, for the most part, employed. A source of danger, which is to be kept in sight in these cases, is an inordinate desire for fluids, the result, not of actual thirst, but of uncomfortable sensations caused by the presence of the tube. In five cases, through the

too frequent administration of liquids in response to the patient's appeals, death took place in consequence of mechanical obstruction of the heart from distension of the stomach.

As sequelæ of intubation, ulceration from pressure of the tube and alterations in speech are mentioned, the former having been met with in almost one per cent. of the cases; the latter may vary from partial to complete aphonia, but is always amenable to treatment. From a tabular statement of the results of the 512 cases it appears that of the patients under 3 years of age, 74 recovered and 197 died; while of those over 3 years old, 115 recovered and 125 died. The chief causes were extension of the membrane to the bronchi, bronchitis, pneumonia, sepsis and exhaustion.

In conclusion, the writer points out the advantage of intubation by means of a rubber catheter and the intubation tube over tracheotomy, in connection with operations upon the mouth or throat, when much hæmorrhage is anticipated—*Univ. Med. Mag.*

THE TREATMENT OF INFANTILE PARALYSIS.

The following is an outline of treatment of infantile paralysis recommended by Simon. At first counter-irritation over the spinal column at a point corresponding to the origin of the roots of the nerves affected. For this purpose the least painful agents should be chosen. The functions of the skin should be stimulated at the same time by means of baths of hot water or vapor, given in the bed. Chloral, aconite and canium may be employed to calm nervous excitement. After the first eight days, electricity should form the basis of the treatment. Simon uses a weak galvanic current, applying the positive pole to the shoulder and arm, the negative pole being placed in a basin of water in which the child's hand rests. The sitting should never last more than eight or ten minutes. At a later stage faradism may be used, always, with the greatest caution. Among drugs, nux vomica is of the greatest service. A drop of the tincture is given twice daily at the two principal meals. At the end of ten days, or earlier if indicated, the nux vomica should be replaced by arseniate of sodium, a sixty-fifth of a grain at a dose. The use of these two remedies alternately is to be continued throughout the case. Salt and sulphur baths are recommended, but only in the last stages of the disease. Above all, Simon enjoins us never to be discouraged, as the treatment must necessarily be very long.—*La France Méd.*

OCCLUSION OF DUODENUM IN A NEW-BORN CHILD.

MM. Porak and Bernheim (*Bull. et Mém. de la Soc. Obstét. et Gynéc. de Paris*, No. 4, April, 1891) describe a case where a woman was delivered at the eighth month of a sickly female child. There was hydramnious, and over six pints of fluid came away during labor. There were two small fibrous deposits in the placenta. On the first day the child vomited dark matter, each attack of vomiting coming on about three-quarters of an hour after suckling. On the third day, as no meconium had passed, imperforate rectum was suspected; but a sound could be passed for over two inches up the anus. An enema was given, and a little meconium came away; but the vomiting continued, and the infant died on the fifth day. The stomach was found much dilated; the lower part of the large intestine was full of meconium, but the remainder of the intestinal canal was like a little packet of worms. The stomach communicated by a contracted orifice, apparently the pylorus, with a blind pouch which had no connection of any kind with the rest of the intestine, which terminated above in a blind extremity close to the pancreas, which opened into it. In a similar case reported by Crooks in 1828, the pancreatic duct opened into the pouch connected with the stomach. Luton described in 1855 a third case where that pouch communicated with the blind end of the intestine by a ligament. There was a similar breach of continuity between the large and small intestine. No trace of peritonitic bands could be seen in Drs. Porak and Bernheim's case.—*Brit. Med. Jour.*

HYGIENE.

THE TETANUS BACILLUS.

Guido Tizzoni and Giuseppina Cattani have recently published some new facts concerning the bacillus of tetanus, which may possibly reconcile some discrepancies between their observations and those of Kitasato. They find (*Riforma Medica*, 1891, p. 157) that virulent cultures always liquify gelatine, have a decidedly alkaline reaction, give out

a disgusting odor, and cause death by acute tetanus in animals in twenty-four to thirty-six hours. Less virulent bacilli still liquefy gelatine, but the reaction soon becomes acid. Still more attenuated cultures show growth much sooner, give off far more gas, do not liquefy the gelatine, give out no bad smell, and have a marked acid reaction. Thus to various grades of virulence correspond notable alterations of the morphological and cultural relations, also of the products, and we here again observe the strict tie which exists between peptic enzyme and the toxine of tetanus bacilli. As to cultures in serum, observers differ. Kitasato has not seen the liquefaction of coagulated blood serum, which has now been noticed by several observers besides the above. Again, as regards liquid serum, its successive solidification and liquefaction by the tetanus bacillus, as first noticed by the authors, has been confirmed by Nikiforoff (*Zeitschr. f. Hygiene*, Bd. 8, p. 497.) The differences are possibly explained by assuming that Kitasato worked with a less virulent bacillus. The authors have already shown that cultures on meat broth and agar are weakened even in the second generation; the same weakening follows culture in other media, only after a long interval of some months. Cultures kept for more than a year under various gases ($H. N. Co_2$) gave attenuated cultures when transplanted into gelatine, but similar cultures *in vacuo* yielded very virulent cultures. Perhaps this was due to freer development of gas by the cultures *in vacuo*. The acids of attenuated cultures are fatty acids, chiefly butyric, as already shown by Kitasato and Weyl, but the addition of butyric acid made no difference to the culture; the acidity is thus a consequence rather than a cause and the fact that it is due to fatty acids, and its small amount, explain why it does not annul toxicity as mineral acids do. Virulent gelatine cultures continued to be very toxic for six months when filtered and kept in the dark, but after that time they lost their virulence altogether, or only caused emaciation and death in about three weeks. They were strongly acid and odorless. In contrast to this, the toxalbumen of tetanus, kept dry for a much longer period, preserved all its toxicity.—*Brit. Med. Jour.*

PRACTICAL INSTRUCTIONS FOR PUBLIC HEALTH DIPLOMAS.

Sixteen different examining bodies in the United Kingdom have formulated regulations for examinations in Public Health. Naturally enough, there is considerable variation in the standards and range of subjects required, and still more in the manner in which they are specified. The recent resolutions of the General Medical Council—making laboratory training and practical sanitary work imperative upon candidates—have led to further modifications in the synopses issued by the examining boards, and, as the Education Committee of the Council pointed out in the report discussed at the meeting on Saturday last, "there is difficulty in understanding what the whole of the regulations under which some of the authorities grant the diploma in Public Health really are." The difficulty is one with which the teaching bodies and intending candidates for these diplomas are only too well acquainted, although perhaps inevitable in a period of transition like the present. The clear and well-timed report of the Education Committee will enable the respective examining boards, with or without pressure from the General Medical Council, to bring their regulations into more explicit form, and to ensure the high standard of efficiency which the Council prescribes.

The laboratory work required should comprise the study of air, water, food, clothing, soil, sewage; meteorology, bacteriology, disinfection, parasites, and certain branches of human and comparative pathology. The Committee suggested that use might be made of the resources of the veterinary school, and that candidates should be required to produce evidence of having received practical instruction in diseases of animals in relation to public health. The Council adapted the recommendation of the Committee in a slightly modified form (see page 1230).

The course of laboratory instruction must cover a period of six months after the candidate has obtained a registrable qualification, in a laboratory or laboratories approved by the examining body. Several efficient laboratories are now being organized, and it is important that the other authorities should clearly define in detail, as the Conjoint Examining Board in London have already done, the points upon which practical instruction is required.

The Committee offer no suggestions with reference to the six months' course of practical out-door sanitary work with the medical officer of health for a county or large urban district, which is to be required in the new order of things. Facilities for this purpose have already been given in Newcastle and elsewhere, but it would be interesing to know how far the new system of pupilage has been

accepted by medical officers of health generally, and by their sanitary authorities.

Both courses of practical work must be taken in a post-graduate year, and at least twelve months must elapse after obtaining the first registrable qualification before a candidate is admitted to the examination for a diploma in public health, the object being "to secure the attention of candidates to the higher special studies, undistracted by the ordinary work of the medical curriculum."

The Medical Council has taken strong action to ensure that the next generation of medical officers of health shall be scientific men, well trained in the theory and practice of this special branch of medicine. Let us hope that the sanitary authorities of the future will also advance with the age, and that a true national public health service, worthy of the country, may at last be formed, with a Minister of Health at its head.—*Brit. Med. Jour.*

MEDICAL CHEMISTRY.

DEODORIZING NAPHTHALIN.

To deodorize naphthalin, simple mixture with benzoic acid or tincture of benzoin does not suffice. Its admixture with camphor and other deodorants has been found to be of but temporary effect. But if it be mixed with benzoin and then sublimed, it loses its tarry odor and acquires a pleasant smell, which it retains.—*Drug. Bulletin.*

NOTE ON *P*-PHENETIDIN AND PHENACETIN.

An interesting communication on *p*-phenetidin and a new test for purity of phenacetin appeared in a recent issue of the *Pharmaceutisch Zeitung*, having Ludwig Reuter for its author, of which the following is a short resume:

Physiological experiments made on rabbits and guinea-pigs revealed the fact that *p*-phenetidin is a poison, continued small doses including nephritis accompanied by albuminuria, larger doses (10 drops hypodermically(causing instantaneous collapse. One drop a day given internally sufficed to superinduce severe nephritic troubles within a few days.

When *p*-phenetidin is dropped into fused chloral hydrate, a strong color reaction ensues instantly, which increases in intensity on the further addition of the former, and on shaking, a strong reaction is seen to take place between the two chemicals. Pouring this mixture into a large volume of cold water, the latter assumes an intense purplish-blue color, while at the same time a dark pasty mass is separated. This body is almost insoluble in water, but more so in the presence of chloral hydrate. A little, however, remains to color the liquid, since 1 drop *p*-phenetidin treated with chloral hydrate is enough to distinctly tinge 2 liters of water, and the chromogen produced from 1 gram of *p*-phenetidin gives a distinct color to 40,000 parts. The new dye may be extracted from its chloral-free aqueous solution with chloroform or ether. Allowing this latter solution to evaporate, spontaneously, well defined hard crystals are formed, dark red and transparent.

Phenacetin (=acet-p-phenetidin) is produced by boiling together *p*-phenetidin and glacial acetic acid, and it will happen that acetylization is not always perfect, so that traces of *p*-phenetidin will pass over. The last traces of this impurity are exceedingly difficult to remove. In view of this fact, and in further consideration of the physiological action of *p*-phenetidin, as reported above, the presumption is warranted that this latter impurity may have been the cause of the many untoward effects following the administration of phenacetin, especially coma and cyanosis.

It therefore becomes the duty of pharmacists to look well to the quality of their phenacetin dispensed, and for this purpose chloral hydrate becomes an excelleut agent, Reuter stating that the smallest traces may be detected. He describes the reaction as follows: Liquify 2.5 grains of choral hydrate, by means of a water bath, in a small test tube, then add 0.5 gram of phenacetin and assist solution by shaking. If the mixture was not exposed to the water bath heat longer than two-third minutes,, the solution will be clear and *colorless* in the total absence of *p*-phenetidin from the phenacetin. If, however, only traces of the impurity are present, the solution *immediately* turns more or less deeply, purplish-red or bluish-purple, according to the degree of impurity.

However, it must be noted that absolutely pure phenacetin, remaining unchanged by heating during five minutes with chloral, will yield a pink coloration when the heat is prolonged to 15–30 minutes. This latter reaction, it will be seen, therefore constitutes a good test of identity for phenacetin.

The same author also mentions an iodine re-action, without, however, crediting the same with any importance. The same test

for for *p*-phenetidin, it seems, has also been employed for some time, but with better success, by Felix Goldmann, who, in a later issue of the Pharmaceutische Zeitung, makes public the details of his method. Goldmann proceeds as follows:

Dissolve with the aid of heat, 0.5 gram phenacetin in 2 ccm. of alcohol, and add 5 ccm., of a solution containing 1.0 gram of iodized potassium iodide solution (potassium iodide, 7.0; iodine, 5.0; water, 100.0) in 20 liters of water. Re-dissolve the phenacetin, which crystallizes out, by continued boiling. If pure no color re-action appears; in the presence of traces of *p*-phenetidin, however, a rose pink color develops.

Goldmann also substantiates the observations of Reuter with regard to the physiological effects of *p*-phenetidin. Administered to dogs, in the proportion or 0.1 gram per kilo of their weight, it produced marked lassitude, vomiting, acceleration of pulse, and cyanotic discoloration of mucus membranes. In addition, the kidneys were found to be irritated, the urine became strongly albuminous, and contained large amounts of *p*-phenetidin and *p*-amidophenol. However, the last two decomposition products are also present in small quantities in urine after the ingestion of phenacetin, free from *p*-phenetidin.—*West. Druggist.*

TEST FOR MERCURIC CHLORIDE.

Mr. Borntraeger recently discusses the best methods of detecting traces of mercuric chloride (in *Pharm. Centralhalle.*)

He points out that any aqueous, oily, or soap liquid containing mercuric chloride gives immediately with zinc chloride and hydrochloric acid a black-gray color, while with sulphuretted hydrogen or ammonium sulphide it immediately becomes blackened.

When shaken with a mixture of potassium iodide, acetic acid, and ether, and allowed to stand, three layers are formed, the middle one constituting a green zone of the mercurous salt.

The separation is said to be so sharp that when carried out in a narrow test tube it gives approximately quantitative results.—*Pharm. Jour.*

TOXICITY OF CRYSTALLIZED ACONITINE.

The great toxicity of crystallized aconitine has recently been again illustrated in Belgium. A lady, according to the *Journal de Pharmacie d'Antwerp*, was ordered to take some pills containing $\frac{1}{4}$ of a milligram ($\frac{1}{1000}$ grain) of this alkaloid, to be repeated five times a day, but after the third dose she was seized with great nausea. A male relative scouted the idea that the pills were to blame and swallowed two of them at once, representing $\frac{1}{125}$ part of one grain of crystallized aconitine. He died amid convulsions within one hour. In commenting on this case M. Ferraud, in the *Bulletin Commercial*, calls attention to the fact that three years ago it was demonstrated to the Paris Pharmaceutical Society that $\frac{1}{4}$ of a milligram given to a grown person had nearly proven fatal. The foregoing only adds strength to the conviction that all of the so-called aconitines should be left severely alone for internal medication.—*Western Druggist.*

SALICYL-SULHPONIC ACID A NEW ALBUMIN TEST.

Salicyl-Sulphonic acid ($C_6H_3.OH.SOH_3O.COOH$), or sulphosalicylic acid, has been found by J. A. Mac William (*Brit. Med. Jour.*) a very delicate reagent for albumin and all other proteids in solution. Following is the method employed: Take a small amount of urine (for example, 20 minims), preferably in a very small test-tube, and add a drop or two of a saturated watery solution of the reagent. If the urine is strongly alkaline, an extra drop or two of the acid should be added, and if no opalescence or precipitate occurs it is well to test the reaction with litmus-paper, and make sure that the urine has been rendered strongly acid. On adding the reagent, shake the tube quickly so as to mix its contents. Then examine at once. The occurrence of an opalescence or cloudiness immediately or within a very few seconds (for example, two to three seconds) is a test for proteids intermediate in delicacy between the cold nitric acid test on the one hand and the acetic acid and heat test (under favorable circumstances) on the other. The development of an opalescence some time after (for example, one-half to two minutes) is a more delicate test than even acetic acid and heat, and shows the presence of minute traces of proteid, which are probably insignificant, from a clinical point of view, as a rule. Next heat the tube to the boiling-point. If the precipitate or opalescence is caused by the ordinary "albumen" (albumen and globulin) commonly present in albuminous urine it does not disappear on heating, but, on the other hand, becomes markedly flocculent. But if the precipitate or opalescence is due to the presence of albumoses or pep-

tones, it clears up on heating (before the boiling-point is reached) and reappears when the tube cools.—*Western Druggist.*

NEWS AND MISCELLANY.

DR. G. FRANK LYDSTON.

Dr. G. Frank Lydston has been elected to the chair of Genito-urinary and Venereal Diseases, in the Chicago College of Physicians and Surgeons.

CHOLERA IN ASIA MINOR.

Reports as to the spread of cholera in Asia Minor have compelled the Porte to active precautionary measures for the watching of ships arriving from the Syrian ports.

DR. J. P. CROZIER GRIFFITH.

Dr. J. P. Crozier Griffith, Professor of Clinical Medicine in the Philadelphia Polyclinic, has also been elected Clinical Professor of the Diseases of Children in the University of Pennsylvania.

THE HISTORY OF TUBERCULIN.

In four acts:

Act 1—Eureka.
Act 2—Vici.
Act 3—Ave, morituri te salutant.
Act 4—De mortuis nil nisi bonum.
Epitaph—Fuit.
—*Medical Press.*

GLYCERIN SUPPOSITORIES.

Polubruiski (*Deutsche Med. Zeit.*) advises that glycerin suppositories are useful under the following conditions: 1. Constipation due to hardened fæces in the rectum. 2. Intestinal impaction in large intestines. 3. Pressure on the rectum from tumors. 4. To prevent straining at stool. 5. In children. 6. To hasten and increase ordinary evacuations.—*Western Druggist.*

THE ANTI-TOBACCO MOVEMENT IN FRANCE.

The French Society against the Abuse of Tobacco offers a prize of 300 francs (£12) for the best report of at least six unpublished observations of affections exclusively attributable to the abuse of tobacco. Full details must be given as to the etiology, symptoms, progress, and termination of the cases. Further particulars may be obtained from the President of the Society, 38, Rue Jacob, Paris.

DR. H. M. WHELPLEY.

Dr. H. M. Whelpley has been elected Professor of Physiology and Histology and Director of the Histological Laboratory of the Missouri Medical College. He has also accepted the office of Secretary of the faculty. The doctor is Professor of Microscopy in the St. Louis College of Pharmacy and Secretary of the Section on Materia Medica and Pharmacy of the American Medical Association.

FEMALE MEDICAL PRACTITIONERS IN JAPAN.

Since 1884, 36 women have passed the primary and 8 the final examination for the license to practice medicine. The examinations have in all cases been held at Tokyo, and the gradual progress of the movement is shown by the fact that while in 1884, only 1 woman passed the primary examination, the number of the successful candidates in 1889 was 15. In 1890, however, the number fell to 7. The number of those obtaining the license to practice has never exceeded 2 in any one year.

HEADACHES OF CHILDREN.

The headaches of school children, says Dr. W. S. Higgins in the *Peoria Medical Monthly*, are caused, not by over-study, but strain on the eyes caused by the white book paper used. Smoked eye-glasses will prevent the trouble, but children naturally dislike to wear glasses, and he now earnestly advises printing school books on yellow paper in blue ink, experiments having proven this the very best combination. For similar reasons white letters on black ground have also been recommended.

THE MODERN DIFFERENCE.

The doctors of the long ago,
With minds upon their patients' pain,
With ready lance were never slow
To bleed 'em in a vein.

The doctors of the present day,
Who count upon their patients "payin,"
Oft find their efforts—so they say—
To bleed 'em are in vain.

REMOVAL OF MOTHER-MARKS.

The *Allgemeine Medicinal Central-Zeitung* gives the following as very efficacious: Mix one part of tartrate of antimony with four parts of *emplastrum saponatum* and work into paste. Apply the mixture over the mark to be removed to the depth of one line (one-twelfth inch,) and cover with a strip of gummed paper or court plaster. On the fourth or fifth day suppuration sets in, and a few days later scarcely a sign of the mark can be seen.—*Dixie Doctor.*

AMERICAN ELECTRO-THERAPEUTIC ASSOCIATION.

The American Electro-Therapeutic Association will hold its first annual meeting at the Hall of the College of Physicians, corner Locust and Thirteenth Sts., Philadelphia, Pa., Thursday, Friday and Saturday, September 24th, 25th, and 26th, 1891, under the Presidency of Dr. G. Betton Massey.

Physicians interested in the discussion of electricity in medicine, are invited to attend without further notice.

HORATIO R. BIGELOW, M. D.
Chairman Executive Council.
WM. H. WALLING, M. D.,
Secretary.
2005 Arch Street, Philadelphia.

MEDICAL TEMPERANCE ON THE CONTINENT.

In the struggle to check inebriety, which has of late so occupied the most cultured intellects on the Continent of Europe, very little has been done in the advocacy of abstinence. The prevailing idea, even among Continental members of the medical profession, has been that the increase of insanity and of other evils from drinking has arisen from the heavier alcohols, and that pure unsophisticated spirits, wines, and beers are really temperance beverages. A new departure has, however, been taken by a few of our Continental *confrères*. Professor Forel of Zurich, Professor Bunge of Basle, and Dr. Wilhelm Bode of Dresden, have established strictly abstinence societies in those cities, and these associations are now vigorously at work.—*British Med. Journal.*

"A COLD IN THE HEAD."

"A cold in the head;
What need be said?
Uglier, stupider, more ill bred;
Almost any other disease
May be romantic if you please,
But who can scoff
At a very bad cough?
If you have a fever you are laid on the shelf
To be sure—but then you pity yourself,
And your friends' anxiety highly excited,
But who do you suppose
Ever pitied a man for blowing his nose?
Yet what minor trial could be worse?
Unless it be reading this blundering verse,
Never fit to be written nor read,
No, nor said,
Except by a man with a cold in his head."

—*Exchange.*

REPORT ON HYPNOTISM.

The Committee of the British Medical Association, appointed to investigate the subject of hypnotism state that they regret that the time at their disposal has been too limited to allow of their completing their researches into a subject of such width and complexity. They are, therefore, as yet unable to express any definite conclusions to the Council. So far as their investigations have gone they seem to prove that the phenomena of hypnotism are such as to favor the belief that it may prove of service as a therapeutic agent when employed legitimately by properly qualified scientific persons.

They have no doubt, and they desire to give emphatic expression to this conviction, that the use of hypnotism by persons who are not so qualified, or without due precautionary restrictions, is greatly to be deprecated, and might properly be limited by legal enactment.

The Committee suggest their re-appointment.—*Brit. Med. Jour.*

MEDICINE AND PHYSICIANS IN RUSSIA.

M. Perfilieff, well known in Russia by his studies in public and social hygiene, and by his publications upon the desiderata of medical teaching and sanitary organization in Russia, speaks this time of medicine and physicians. He observes that the natural sciences are too sparingly and badly taught in Russian gymnasiums, and that, during their stay at the Faculty, the medical students are content with studying the theory of medicine without acquiring enough practical knowledge. The author complains that young physicians confine themselves to specialities as soon as they obtain their diplomas, so that there are no (or but very few) physicians qualified in natural philosophy.

The country has no need of female physicians; but these may usefully practice

medicine within restricted limits, well defined, or among the Mahommedan tribes in the empire, whose religion and customs are opposed to the practice of the medical art by men.

The sanitary organization of the empire and the sanitary conditions of life with most of the inhabitants leave much to desire. Mortality is much higher in Russia than in other countries. Of 1,400,000 male children born in 1855, within twenty-one years (in 1876—time of the conscription) 610,000, or 43 per 100 only, were found living. Among 1,512,202 boys born in 1862, in 1882 (time of the conscription) 777,769, or 51 per 100, were found living. Among 382,109 called in 1884, 71,607 men, or 19 per 100, were found, after medical examination, incapable for military service. The military incapacity is in most cases determined (in 32.9 per 100 cases) by affection of the bones, articulations and muscles.

These sad percentages need no commentaries and show that if France is threatened with depopulation on account of its feeble natality. Russia whose natality is considerable, is threatened especially by the physical degeneration of its inhabitants, a degeneration which was ascertained repeatedly on all sides through the latest statistical inquiries of Russian hygienists.—*Cin. Med. News.*

AMERICAN PUBLIC HEALTH ASSOCIATION.

The Nineteenth Annual Meeting of the American Public Health Association will be held at Kansas City, Missouri, Kansas, October 20, 21, 22, 23, 1891.

The Executive Committee have selected the following topics for consideration at said meeting:

1. Sanitary Construction in House Architecture.

(a) Heating; (b) Lighting; (c) Drainage; (d) Ventilation.

2. Railroad Sanitation.

3. Meat Supplies.

4. Milk Supplies of Cities.

5. Arsenical Papers and Fabrics.

6. Isolation Hospitals for Infectious Diseases in Cities.

7. Papers upon any of the subjects upon which special committees have been appointed.

8. Papers on Miscellaneous Sanitary and Hygienic Subjects.

All papers will be received by the Executive Committee subject to the requirements of the by-laws. Preference will be given, however, to papers upon the subjects selected by the Committee in making up the daily programme of the meeting.

All persons who propose to present papers at the next meeting of the Association, will be governed by the following by-laws of the Executive Committee:

"4. All papers presented to the Association must be either printed, type-written, or in plain handwriting, and be in the hands of the Secretary at least twenty days prior to the annual meeting, to insure their critical examination as to their fulfilling the requirements of the Association.

"5. If any paper is too late for critical examination, said paper may be so far passed upon by the Executive Committee as to allow its reading, but such paper shall be subject to publication or non-publication as the Executive Committee deem expedient.

"6. All papers accepted by the Association, whether read in full, by abstract, by title, or filed, shall be delivered to the Secretary as soon as thus disposed of, as the exclusive property of the Association. Any paper presented to this Association and accepted by it shall be refused publication in the transactions of the Association if it be published in whole or in part by permission or assent of its author in any manner prior to the publication of the volume of transactions, unless written consent is obtained from the Publication Committee.

"7. Day papers shall be limited to twenty minutes, and evening papers to thirty minutes, each."

Invitations extended to individuals to prepare papers, for the Association do not imply their acceptance by the committee, merit alone determining that question.

All communications relating to local matters should be addressed to E. R. Lewis, M. D., Chairman Local Committee of Arrangements, Kansas City, Mo.

Another circular will be issued before the meeting, giving transportation rates, hotel rates, etc.

Blank applications for membership can be obtained by addressing the Secretary, or Chairman of the Local Committee of Arrangements.

Officers: President, Frederick Montizambert, M. D., Edin.; F. R. C. S.; D. C. L.; Medical Superintendent Canadian Quarantine Service, Quebec; First Vice-Presi- Dr. Thomas F. Wood, Wilmington, N. C.; Second Vice-President, Dr. Henry B. Horlbeck, Charlestown, S. C.; Secretary, Dr. Irving A. Watson, Concord, N. H.; Treasurer, Dr. J. Berrien Lindsley, Nashville, Tenn.